Gleanings in Bee Culture

June, 1945..... Vol. 73, No. 6

Let's Lobby for Legumes

By Clarence Tontz

At the right, second year's growth sweet clover in 42-inch rows with rock phosphate and limestone applied to the soil. Although the area on the left was also planted in sweet clover, no stand was obtained because the soil was given no fertilizer treatment.

It was found out a long time ago that there wasn't much profit for a beekeeper to plant and raise his own bee pasture, but too few beekeepers seem to realize that there are ways and means to get some one to raise it for them. I am referring mainly to the nectar bearing legumes. There is no call to try to high-pressure anyone to plant some bee pasture, but if beekeepers made it a point to acquaint themselves with the possibilities of certain legumes in their particular locality, they could make timely and helpful suggestions. There is no question but that the right planting at the right time of legumes benefits the grower as much, if not more than the beekeeper.

In California, legumes appear to be "looking up". A great deal of publicity has been given to various clovers in the western papers. Among other things, they are gaining favor with dairymen and swine growers for improving their pastures, and for boosting farm crop yields. In Tulare County, California, several dairymen were getting worried because they couldn't irrigate Ladino clover often enough on light sandy soils to provide a good pasture. Recently, according to R. L. Worrell, assistant farm advisor, they switched to sweet clover which provides excellent grazing and requires a deep irrigation only every two weeks. In this particular region the sweet clover requires no more irrigation than alfalfa because of its deep-growing tap root which goes down four to six feet. Worrell advises using both white blossom and yellow blossom in the pasture which is seeded in a mixture with other clovers and grasses.

Ladino, while not popular in some

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B & Z Library

Harvesting alsike in the midwest. Legumes, from the dependable honey - producing alfalfa of the Imperial Valley of Southern California to the excellent clovers of the corn belt, are the beekeepers' heritage. Instead of following the nectar-producing plants around, we can bring them to us by timely and helpful publicity.

western areas, is highly recommended as a pig pasture by John Layous of Monterey County, California. He plants a combination of Ladino and alfalfa at the rate of three pounds of clover to 10 pounds of alfalfa. Ladino, according to George A. Cross, assistant farm advisor of Stanislaus County, was highly beneficial in making possible the favorable production of hybrid corn that was grown in rotation with the clover.

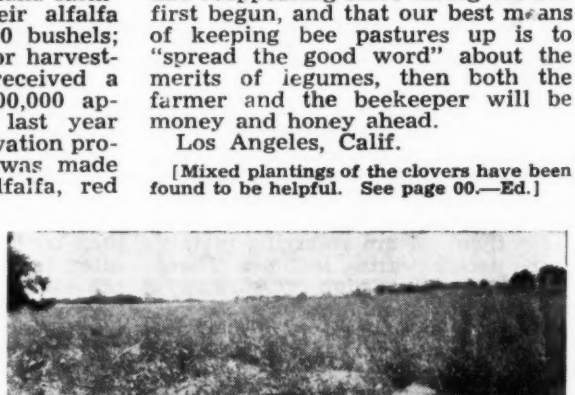
Alfalfa diseases have become a prime factor in reduction of stands throughout most of the West. Bacterial wilt is the worst of the lot. Some insects contribute their share of the damage. Yet, Montana farmers last year boosted their alfalfa seed production to 109,000 bushels; 84,000 acres were saved for harvesting. Western farmers received a good share of the $12,500,000 appropriated by Congress last year for the agricultural conservation program. Special payment was made on a pound basis for alfalfa, red clover, and alsike clover. Farmers are especially urged to put marginal land to use and leave as many acres as possible for seed instead of cutting for hay.

Recently a farmer who had suffered severe losses in his sweet clover from plant disease was asked what he intended doing to remedy the situation. He replied, "I aim to plant twice as much clover as I had and encourage my neighbors to do the same. I like clover and the more of it we have, the more interested and united we'll be in fighting any pests."

If beekeepers will remember that bee pastures have been vanishing and reappearing since tilling the soil first begun, and that our best means of keeping bee pastures up is to "spread the good word" about the merits of legumes, then both the farmer and the beekeeper will be money and honey ahead.

Los Angeles, Calif.

[Mixed plantings of the clovers have been found to be helpful. See page 00.—Ed.]



Although on a slope this field of sweet clover withstood a drouth due mainly to the terraces which prevented much valuable water from draining off in the spring. A nearby clover field without terraces was greatly depleted.

Getting Bees Out of Supers

By William H. Burrows

[Note: This article was received March 16, 1945.]

Down here in Florida, on March 10th, the orange blossom honey flow is about over. Palmetto honey may begin to come in now at any time, and to keep the orange honey separate, the supers must be taken off, honey extracted, and supers returned to the hives. At this particular operation, just between two honey flows which may overlap, it is some job to get the bees out of the supers. The big producers may get by pretty well with the carbolic acid method, but the smaller producer must find some other good method of getting the bees out of the supers, or he must shake the combs, brush bees, and get stung no end.

In the October, 1943, Gleanings, Mr. C. O. A. Kramer described an "escape cloth" which apparently was a canvas cover into which a six-inch circular hole was cut, and over which hole a screen cone was riveted. The cone was made of window screen and had a half-inch hole in the top from which the bees could escape.

This writer was interested in anything that would help get the bees out of the supers, but had visions of such a canvas cover laying on the tops of the frames and getting all gummed up with honey after a few applications. So, in a modification of the idea, I made an inner cover with a six-inch square hole cut in the center. Over this hole I tacked a wire-screen pyramid with an escape hole in its apex. I found it easier to design and form a pyramid than a circular cone.

Shortly after reading Mr. Kramer's article, I had some fall honey to remove. The conventional bee escape never had worked for me in more than about half of the hives, the others having as many bees left at taking-off time as when the escape was inserted. So I went out that fall, full of enthusiasm and carrying my new inner covers with their wire-screen pyramids. I stacked the supers 4 to 5 feet high on a solid bottom and covered them with the new escape at about 3:00 P. M. At 6:00 P. M. I brought all the supers into the honey house, and there were not a dozen bees in a stack.

My inclination was to write a note to a bee journal at once, but having been in research work for many years, caution forbade such a hasty procedure, and as events have proven, rightly so.

Just about a year ago, I began taking off my orange blossom honey in the same manner, but this time it was different. Very few of the bees came out, although I left the stacks set over night. I could explain this failure only to the fact that there were hosts of young bees this time, whereas in the fall there were very few. Time was pressing, so I shook and brushed again and collected stingers once more.

After it was all over I did some thinking and came to the conclusion that perhaps the young bees would not move upward to escape. It seemed possible that instinct told them that they should go downward toward the brood chamber.

This year, working on the above theory, I used the following method:

I placed an empty super on bricks to hold it off the ground and open at the bottom. On this I placed a regular inner cover with a conventional bee escape in it, and piled my supers on that. Into the stacks, which I piled about chin high, I put supers from two or three hives—as many as were needed to complete the stack—and then covered the stack with my new inner cover with the wire-screen pyramid. In a short time, bees were pouring out of the top and bottom.

Whether or not my theory regarding old and young bees was correct, it was apparent that some preferred to go up and others to go down. To me it seems unimportant for the moment whether it is the old bees that go up and the young that go down, or just an individual preference that has nothing to do with the age of the bees. That is another research problem. It may be possible that with an opening at top and bottom, a draft is created that has some effect on emptying the supers. The important thing to me is, that although the supers were jammed with bees, this system resulted in an almost complete emptying of

(Continued on page 279)

No. 1. The "silent" assistant is a ladder-like device used to lower tipped colonies.

No. 2. The operator places the helper against the back of the colony.

No. 3. The ladder is held in one hand while the colony tipped with the other.

My Silent Assistant

By C. W. Schaefer

This is not my wife. It is the simple gadget shown with the author in the accompanying photographs and is about the best helper that a beekeeper can wish for in the bee yard. With it an operator can take one of those sky-scrapers down faster than any two men could possibly do by the old method of removing the cover and breaking the seal on each body before setting them off one by one.

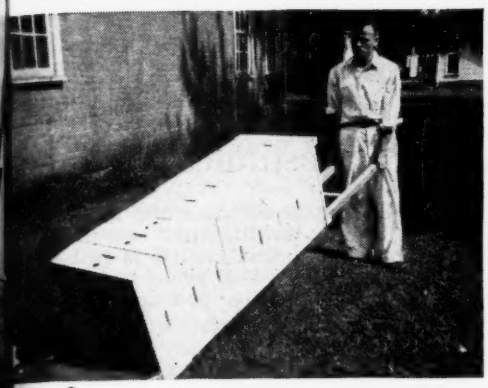
This helper is easily made from two pieces of 2 by 2 inch lumber of good quality, made into a ladder-like device using four cross pieces of lumber of the same dimension and fastened with angle irons. Anyone who can use a screw driver and hammer can put one of these together in 30 minutes and have a helper which will give unlimited service.

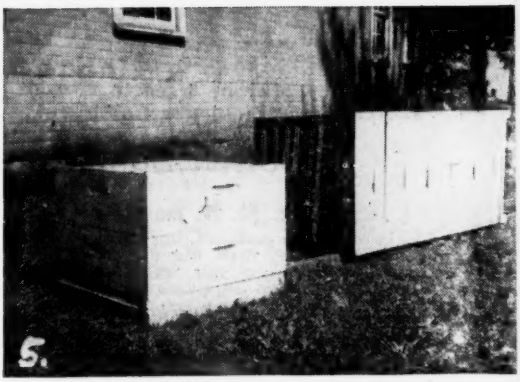
After thoroughly smoking the bees at the entrance, the ladder is placed snugly against the back of the colony, held in place by one hand while with the other the colony is tipped on its back edge. The operator shifts his position to one behind the colony and taking hold of the handles, lowers it to the ground. In a few seconds the colony is down and in a few more the operator can pry open the bodies of the brood nest by sliding them on the ladder. Thus the brood chambers are quickly separated to prevent excessive numbers of bees to gather in any one body, or the queen from running all over the hive. At the same time the bodies are all tipped on end so that the beekeeper can quickly glance at the bottoms to determine the condition of the colony. After completing the necessary manipulations the operator replaces the bodies in the order he wishes and almost before the bees realize what has happened the colony is reassembled. Result; much less stinging.

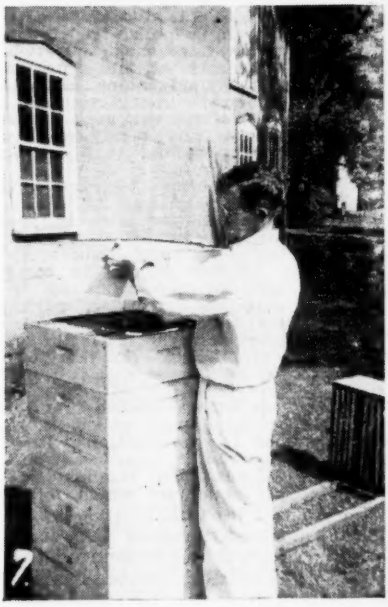
This ladder is serviceable during the honey season when colonies are stacked six or more bodies high. At any other time colonies can be tipped over handily without aid because the seal between bodies is strong enough to hold them together.

With this method work on the colony starts at the bottom. In other words, the bottom board is the first to be detached. And for some operations the top need not be removed from the upper body at all. This is true when a quick inspection of the colony condition is desired, or when being examined for AFB.

Recently this ladder was shown to two inspectors visiting the author's bees. Using the method, in two hours' time they had inspected two yards of 52 colonies some of which were double. After tipping the colony neither the top nor the bottom







No. 4. The operator shifts his position to the back of the colony and lowers the supers with little effort.

No. 5. Manipulation of the colony can now begin with the brood nest.

No. 6. The supers are pried apart, examined from the bottom, and placed back on.

No. 7. Placing the last supers on the colony.

was detached from the corresponding bodies. The seal between the first and second bodies was broken and the first body with the bottom attached was placed on the stand. After inspection of that body, the next was placed in position and inspected, etc. The last super was replaced with the cover still attached.

During the spring manipulations the author used this method to find queens, and during one eight-hour day 160 queens were found, clipped and marked in 80 double colonies. After being tipped for this operation the colony was well smoked at the bottom, followed by a brief pause to allow the queen to move up. In nearly every case the queen was found in the top body and many were found on the under side of the cover.

The idea for this method occurred to the author on one of those sleepless nights during the spring of 1942 when he was trying to plan a procedure which would enable him to get his bee work done in a very limited time. The gadget described was developed and used this season. Now it has a permanent place among the musts to be taken to the out yards. It does cut down on the time and energy spent in the bee yard. Try it.

Middleton, Wis.

How They May be Used to Increase the Yield per Colony

Pollen Supplements *and* Substitutes

by Dr. M. H. Haydak

[Perhaps no subject has evoked more general interest than the discussions that nave occurred in our columns on the subject of pollen supplements and pollen substitutes. The first refers generally to a mixture of soybean flour, 75 per cent, and trapped pollen, 25 per cent; the second to either skim milk powder or brewers' yeast, 25 per cent, mixed with 75 per cent soybean flour, expeller processed. Dr. C. L. Farrar, of the U. S. Bee Culture Laboratory, Madison, Wisconsin, is of the opinion that he can get a greater increase in brood and bees from the combination of natural pollen and soybean flour, than from the substitute, but some have not been able to trap the pollen, and these people are looking with hopeful expectation toward the use of skim milk powder or brewers' yeast as a substitute for pollen. Apparently excellent results have been secured with either the natural pollen supplement or the substitute of skim milk or brewers' yeast. Which combination will gain general use, the future will have to determine.

The real reason why there is such an interest shown in this subject is because of the possibility of greatly increasing the numerical strength of a colony. Even in localities where there is a scarcity of natural pollen, it has been demonstrated that it is possible to increase the amount of brood in the colony before bees can fly, and this may be two or three weeks before bees can obtain pollen from natural sources.

On page 281 June, 1944, Gleanings, Dr. Farrar proved to the writer that in March he was able to take three pounds of bees out of his pollen-fed colonies and then a month later shake out two more pounds from each of the same colonies, leaving the original colony with enough bees to gather the honey crop. In the meantime, Dr. Haydak has been experimenting with various substitutes, and has succeeded in getting results that are worth studying very carefully.

It is perhaps too early to forecast whether it is possible to use a substitute of skim milk or brewers' yeast and secure the same results as with the trapped pollen and soybean flour.

At this point, the reader is referred back to the article by Dr. Haydak, on page 126 and 127 of our April issue. In the first column, page 127, Mr. C. M. Isaacson, who furnishes regularly "Second Glances" for this journal, writes in the May issue that it is not clear to him just what Dr. Haydak's final conclusion was with reference to the relative values of the natural pollen vs. skim milk powder in combination with soybean flour. Apparently, there was some confusion, so we wrote Dr. Haydak, and he replies as per statement which follows:—Ed.]

The chief cause of the misunderstanding as I see it now was the fact that I presented the table giving the total brood rearing activity of the experimental colonies and spoke briefly about the detailed results. The table of detailed results is rather bulky and I tried to avoid its presentation in a popular journal.

In the previous experiments, beebread was compared with the soybean flour-dry skim milk mixture and the latter was found to be more efficient than the beebread alone. In last year's experiments the mixtures of pollen and soybean flour, and dry skim milk and soybean flour have been compared. If we look only on the final results of this comparison, then they will seem to be equal, because the total number of sealed and unsealed larvae produced by both colonies was about the same. However, when we examine these results by the ten-day periods then it is obvious that for some reason the character of the brood rearing activity of bees fed the dry skim milk mixture was inferior to that of pollen.

Unfortunately Mr. Isaacson overlooked the starting of the sentence which he quoted in his remarks, **"At the end of the second and third day periods** there were about four times as many sealed cells in pollen (supplement fed colonies as in those fed the dry skim milk mixture." Because of this lower efficiency in the second and the third brood rearing periods it was stated that a "dry skim milk pollen substitute is less effective than pollen supplement" for long periods of feeding.

For a short period of feeding, a dry skim milk mixture is equal if not better than pollen supplement. The cause of this discrepancy seems to lie in the fact that after about two weeks of feeding the bees for some reason do not consume dry skim milk pollen substitute as readily as pollen supplement or the dried brewers' yeast mixture. If bees were induced to eat the dry skim milk mixture they would derive the same benefit as from the pollen supplement. The fact that the emerged bees fed dry skim milk substitute developed their bodies normally and produced a considerable amount of normal brood during the first ten-

(Continued on page 283)

Opinion on Combs

By Eldon Martin

Why Do Bees Leave Space at the Bottom of Brood Combs?

It seems to me that the conditions in a bee tree, where bees have lived for thousands of years, cause them to instinctively react to those same conditions found elsewhere. A tree might have a long and narrow hollow or it might be of various dimensions, but, generally speaking, it has only one set of combs that reach from the top to the bottom and from side to side. For support, the combs have only the top, bottom, sides of the hollow space in the tree, and the law of gravity. If they started building comb from either the sides or bottom the law of gravity would be against them in several ways. The bees can hang down but they could not work up from the bottom to properly form a cluster to draw comb; and, too, the comb when first drawn, if started from the side, would probably warp to one side or the other, and the same thing would apply if it were started from the bottom and extended upward. By starting at the top and coming down it works better than in any other way.

It can easily be understood why comb is attached at the top and sides, but what great benefit would the bees in nature get by attaching the comb to the bottom?. I don't think it is necessary to go into detail about things we already know, more than I already have.

Anyway, the thing I want to point out is the similarity of the four drawings. They all add up to the same thing—a single comb is attached at the top and sides but not to the bottom. This might not hold true in all cases but this is along the line of their instinctive habits. Probably the bees consider the end bars are the sides and the lower comb only the bottom of the comb.

I don't believe I can recall where bees attached the comb to the floor of a box hive. One can tilt a box hive up and not have to break the comb as would happen if the top were taken off. If nothing but the frame alone in Fig. 2 is considered, we would have the same thing as in Fig. 1 and 3, and also if the two lower top bars are taken away, and the two upper bottom bars and the two bee spaces which ordinarily wouldn't be there, we would also have the same thing in Fig. 4 as in all the others.

Goodland, Mo.

[It is generally believed that bees are inclined to gnaw away the comb next to the bottom board, and especially near the entrance, because apparently they do not want either honey or brood to be in the cold air or where robbers can get at them. No use building comb if it won't be used there.—Ed.]

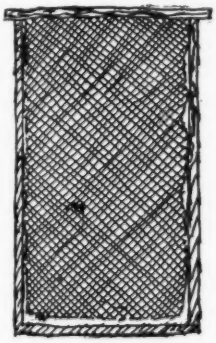


Fig. 1

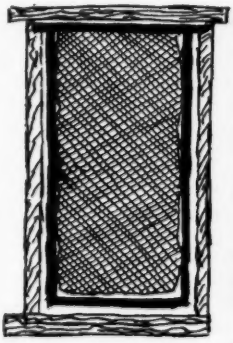


Fig. 2

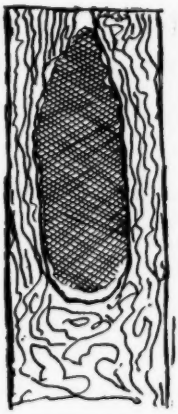


Fig. 3

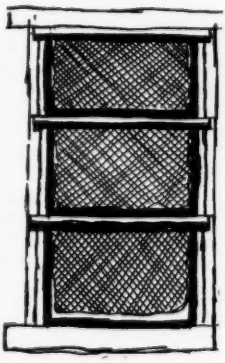


Fig. 4

The four drawings are side views which help to illustrate my theory on why bees gnaw an inch of comb away from the bottom bar of the brood chamber. Fig. 1 represents a box hive; 2, a tall hive with a long frame; 3, a hollow tree; and 4, a standard hive three stories high.

So You Have a Sweet Tooth

By Mrs. Benj. Nielsen

Honey applesauce drop cookies served with honey sweetened lemonade.—Photo from Kellogg Co.

And how can you satisfy it—and a whole family of sweet tooth possessors? "My sugar stamps just won't stretch to desserts—and there's just never enough for a batch of candy any more!" How often we hear that plaint, particularly just before a new sugar stamp is due to become valid. And how we honey-way cooks chuckle over that! We listen, feeling so smug (inwardly, of course, for who likes people who act smug!) because we can manage all kinds of desserts. Those complaining folks should be honey users! And here's a grand opportunity to convert them. Don't miss this golden opportunity to slip them some of your best honey recipes!

Once you have grown accustomed to cooking or serving foods with honey, the ordinary sugar sweetening is as unsatisfactory as cooking and serving foods without salt. Truly! Honey is more than a sweetening, a flavoring agent—it has a seasoning quality as well. To the honey convert, foods prepared with sugars and the various corn syrups actually taste flat (that food-without-salt taste!); they are sweetened, to be sure, but lack that certain zip, flavor, seasoning—call it what you will—that only honey can impart.

Honey Applesauce Drop Cookies

One-half cup shortening, ½ cup brown sugar, ½ cup honey, 1 egg, 1 teaspoon soda, 1 cup honey sweetened apple sauce, thick, 1¾ cups sifted flour, ½ teaspoon salt, 1 teaspoon cinnamon, ½ teaspoon nutmeg, ½ teaspoon cloves, 1 cup raisins, and 1 cup bran.

Blend shortening and sugar; beat honey in gradually; add egg and beat well. Add soda to applesauce which should be thick. Sift flour with salt and spices; add to first mixture alternately with applesauce. Add raisins and bran. Drop by teaspoonfuls onto greased baking sheet, about two inches apart to allow for spreading. Bake in moderate oven, 375 degrees 15-20 minutes. Yield: 3 dozen cookies 2½ inches in diameter.

Honey Apple Pie Oatmeal Crust

One-fourth cup shortening, 1 tablespoon sugar, ¼ cup flour, ¼ teaspoon salt, 1 tablespoon honey, ¼ cup oatmeal crumbs (firmly packed), ¾ cup honey, 5 cups finely sliced apples, and ¼ teaspoon cinnamon.

Cream shortening and add sugar. Stir in flour, salt and 1 tablespoon of honey. Then add oatmeal crumbs. Mix well. Pack mixture into greased pie plate. Bake 15 minutes in a moderate oven. For the filling bring honey slowly and carefully just to boiling point, add apples and cinnamon. Cook until the apple slices are transparent being careful not to scorch. Cool. Then pour into the cooled oatmeal crust. Serve with honey sweetened whipped cream.

Honey Apricot Dessert

Two cups cooked dried apricots, 2 tablespoons flour, ⅛ teaspoon salt, 1½ cups additional flour, 1 egg, beaten, 1½ teaspoons baking powder, ¼ teaspoon cinnamon, ½ cup apricot juice, ⅓ cup honey, 1 tablespoon sugar, ½ cup milk, ¼ teaspoon salt, additional, and 1 tablespoon lemon juice.

Combine apricots, two tablespoons flour, honey, and ⅛ teaspoon salt. Add juices, and spice and pour into shallow greased baking pan. Cover with dough made by mixing remaining flour, baking powder, sugar, salt and blending in the fat. Add egg and slowly pour in the milk until a soft dough forms. Pat out and fit on top. Make slashes on top to permit steam to escape. Bake 30 minutes in a moderate oven, 350 degrees.

Eighty Years Among the Bees

By E. R. Root

A. I. Root's Hunt for a Pollen Substitute in 1873

The beekeeping world is all agog today about pollen substitutes and supplements. It would seem appropriate to tell what Langstroth and A. I. Root were doing and saying about 75 years ago.

A. I. Root has been accredited with being the first in this country to bring out the feeding of rye-meal as a substitute for natural pollen. From evidence at hand, after going over back volumes, that honor should go to Langstroth. On page 48, of Gleanings for 1873, A. I. Root was asking whether bees can raise brood without pollen, so he did some research work and found that when bees are fed on sugar syrup without any pollen in the combs or in the field, the queen would lay eggs in a perfectly normal manner but the eggs would not hatch. So he began feeding rye-meal flour placing it in trays in the sun outdoors when bees could fly. To his amazement, the bees fairly rolled in the meal and carried it into the hives. He expected there would be a lot of brood, but he was disappointed.

Langstroth, The Pioneer

Well do I remember the days away back in the early 70's, when A. I. Root was feeding pollen in trays outdoors. But he wasn't getting anywhere. He did not then know a fact which Dr. C. L. Farrar, U. S. Bee Culture Laboratory, Madison, Wis., brought out, that when a ground grain of any kind, especially soybean flour, is given to bees they will raise brood when pollen is already in the hive or in the field.

L. L. Langstroth, then living in Oxford, Ohio, was in the habit of coming up to Medina occasionally, and spending a week at a time. He fairly bubbled over with the new problems and their solutions. A. I. Root explained to him on one of these occasions, in May, 1875, why he was not getting anywhere with feeding bees rye-meal. I quote from Gleanings in Bee Culture, May, 1875:

> Our bees ceased getting the natural pollen and he suggested that we give them a substitute in their hives. We at once expressed incredulity, and when he mentioned a mixture of honey and rye-meal, we told him we had tried it over and over again without the slightest trace of success. He smiled pleasantly, directed Mrs. N. to sift the coarse particles out of the rye meal, and make a 'feed' of honey and the meal that should not be thicker than good syrup. This was put in a feeder and given them when quite warm. Sure enough they take it up like chickens, and ask us as well as they can for more.

This brief quotation will give one something of the idea of that wonderful personality of Langstroth, of which so much has been said. It also shows that in the 60's Langstroth had been feeding honey and rye-meal flour with the coarser particles sifted out, and getting brood. Langstroth had actually been the first to mix sugar syrup or honey with a pollen substitute, but apparently even he did not know that there must be some natural pollen either in the comb or in the field which the bees could get; however, he was getting brood, and so was A. I. Root.

In the first edition of Langstroth's book, published in 1853, we find the following on page 20:

> "The importance of pollen to the nourishment of the brood has long been known, and of late successful attempts have been made to furnish a substitute. The bees in Dzierzon's apiary were observed by him early in the spring, before the time for procuring pollen, to bring rye meal to their hives from a neighboring mill. It is now a common practice on the continent of Europe, where beekeeping is extensively carried on, to supply the bees in early spring with this article. Shallow troughs are set in front of the apiaries which are filled about two inches deep with finely ground, dry, unbolted rye meal. Thousands of bees resort eagerly to them when the weather is favorable, roll themselves in the meal, and return heavily laden to their hives. In fine mild weather they labor at this work with astonishing industry, and seem decidedly to prefer the meal to the old pollen stored in their combs. By this means the bees are induced to commence breeding early, and rapidly recruit their numbers. The feeding is continued till the bees cease to carry away the meal—that is, until the natural supplies furnish them with a preferable article. The average consumption of each colony is about two pounds of meal!"

It now devolves upon me, the only person living who knew him well, to resurrect the work of this "'Gameliel" at whose feet I have often sat. I shall quote him often in this series, "Eighty Years Among the Bees." You may begin to wonder if there is anything new under the sun in bee culture when you read what Langstroth and A. I. Root did in the early days.

From the Field of Experience

BEES THAT SWARM PRODUCE LESS HONEY

By E. S. Miller

It is true that bees that swarm produce less honey not only with respect to the swarms that escape but also of those hived. Here are some of the reasons why: For three weeks after a swarm is hived there is no emerging brood. During this time, although there seems to be greater activity at first, colony strength becomes depleted and field bees, instead of gathering nectar, are necessarily occupied in comb building, evaporating nectar and feeding the queen and larvae. While a large number of larvae reduce the amount of honey stored, emerging bees serve to increase it. Young bees do not gather nectar but their work within the hive during a honey flow may be fully as important in releasing field bees for outside work. With no emerging brood there is a considerable loss in honey stored.

As to the parent hive, it is well known that if the greater number of bees have departed with a swarm, little honey is stored for several weeks. This is due to the fact that there are a few workers of sufficient age for gathering nectar until the colony can again build up, and by that time the honey flow may be over. Beemen who have taken the trouble to compare results know that a colony kept intact will store much more than will the two resultant colonies if allowed to swarm.

Valparaiso, Indiana.

FIRE IN THE APIARY MAY BE DISASTROUS

By Ernest Finn

Last spring, due to the fact that the people on whose property my apiary was located are afraid of bees, it was decided that it would be best to move them to another location. Two doors down the road, a distance of about three hundred yards, is a market garden on which is a large apple orchard and the owner thought it would be good for the orchard if he let me keep my bees there.

About the middle of April I unpacked the hives in order that I could have them in their new location in the orchard just before the fruit bloom started. There was, of course, a considerable quantity of dead leaves in the packing to be disposed of so I piled these in a heap a short distance outside the apiary enclosure and set fire to them.

There was a slight breeze blowing but I thought I could keep the fire from spreading to the surrounding dry grass by beating out the flames with an old burlap sack whenever they spread too much. I was mistaken and soon had the whole field afire. A garage was located on one side and I had to make sure it didn't catch fire. While I was doing this, the fire spread around to the far side of the apiary where I couldn't see it and it wasn't until I had put out the fire beside the garage that I was able o check up on what was going on elsewhere.

I had four nuclei hives, containing two nuclei each, piled two-and-two, so that they resembled two two-story colonies side by side. They had been wintered this way and I had not yet set the two upper ones down on the ground. I found that by this time the two upper ones had caught fire and were beyond help so I kicked them off in order to save the two lower ones. One of these was all right but the inner cover of the other was afire and when I kicked it off I found the tops of the frames were also afire. I managed to smother the flames but the colony was evidently too far gone because it, too, died out about two weeks later. **Moral: keep the grass in your apiary short, treat the ground so grass won't grow around your hives, or—don't play with matches!**

Etobicoke, Ont.

HIVING THE FIRST SWARM

By Wayne A. Russell

(Continued from May)

My fame as a beekeeper has spread far afield—well, at least to New Milford, two miles from my home. The police sergeant in that town phoned me to ask if I wanted a swarm of bees. Assuredly I did. So neighbor Jack Witmondt (who is not a beekeeper, but who seems to be present every time I mess with my bees), my wife, with her sister, and I all piled into Jack's "one-of-the-three." A few minutes later we were breathlessly demanding of the policeman to be led to the swarm.

He took us around the corner from the station, and pointing aloft, triumphantly said "There!" Indeed, a beautiful prime swarm it was, but alas! They were high in a shade tree, far out on the tip of a limb.

But not friend Jack. He's an insurance salesman and has all the tenacity required of that calling. He scoured the neighborhood and came up with a long slender ladder. True, a few rungs were missing, and some of the others looked a little weary, but it was long enough to reach within three feet of the cluster.

Jack then placed his car across the sidewalk directly under the swarm, leaned the ladder against the car, placed my wife and her sister on the bottom rung as a counter-weight and stood on his car-top to help support the ladder. Next, he suggested **I** climb up to the free end of that long ladder, like a monkey on a stick. That man Witmondt is reckless, where **my** life is concerned.

Against my better judgment and to the cheers of the neighborhood's kids, I climbed toward the heavens—in more ways than one, thought I. Balancing my basket on the top of the ladder, I went to work with pruning shears and in a moment the swarm dropped into my basket—most of it.

From that point on, events happened so fast they seemed nearly simultaneous. I got a fleeting glance of Jack going through the air off the cartop like a flying-squirrel—and he seemed to have a derby hat on. This struck me as strange, since he's partially bald and doesn't wear a hat. The ladder began swaying like a cattail in a windstorm and I became very busy, trying to keep the basket of bees, the ladder, and myself united. And through it all came the shouts of the assembled gallery.

Yes, you guessed right. A clump of bees the size of a grapefruit had missed the edge of the basket and caught Jack squarely on top of his head. He was preoccupied for a while fanning them off with his handerchief. Meanwhile, I gingerly crept down the teetering ladder.

But withal—not a sting was received by anyone except my wife's sister, who got one caught in her hair. And that swarm turned out to be my gentlest and most productive colony.

Yes, if it can happen at all, it **will** happen to me!

River Edge, N. J.

BEEKEEPERS TO THE RESCUE!

By Pfc. Frank J. Tuccillo

Acting as a "Seed Task Force," the Goetz Tractor Company of San Angelo, Texas, is helping the farmer get bees to aid in cross-pollination. Beekeepers in the west Texas area have been requested by them to locate their hives in or by fields where potential seed harvests are blooming.

The farmers are highly optimistic about the coming seed yields. Their optimism is no doubt brought on by reports coming from agricultural colleges indicating that certain seed yields have been multiplied four and five times by placing one or more hives per acre directly in the field. Clover seed is one of the cited examples that has shown a rich harvest.

The belief that the bumblebees have been responsible for the greatest part of cross-pollination has proved to be erroneous. The honeybees now take credit for over 75 per cent. The longer tongue of the bumblebee makes her a better pollen carrier, but the scarcity of her numbers, due to her inability to last through the cold winters, makes the honeybee, collectively more productive.

WHAT ABOUT THE VETERAN?

When John W. Holzberlein, President of the National Federation of State Beekeepers' Associations, appointed me chairman of the Rehabilitation Committee, I realized that here, indeed, was a real challenge to the Federation and the industry.

Within a week I received letters from the American Legion, Veterans of Foreign Wars of the United States, National Selective Service System, and the Veteran's Administration pledging full cooperation in our program.

Based on suggestions from these various organizations, our program will be as follows: (1), To assist the veteran interested in beekeeping in his academic work should he choose to study beekeeping in school. (2), To assist and advise the veteran beekeeper in re-establishing his business. (3), To arrange employment for those experienced in beekeeping and for those who wish to learn the business through practical application.

Now that the various organizations have promised full cooperation, it is up to the honey producers to bring up the other flank.

Are you willing to aid a returning serviceman interested in beekeeping? The Committee makes these suggestions: Get in touch with your local Selective Service Board, and your local County Agricultural Agent through whom the Selective Service Board will work whenever a veteran expresses a desire to enter the agricultural field, and furnish them with your name and address, and a few details as to period of employment, etc. Also furnish this information to your state association secretary, mailing a copy to me.

We have promised to supply to Selective Service, U. S. Employment Service, American Legion, and Veterans of Foreign Wars, the names of beekeepers who will aid veterans interested in beekeeping. To set up this list, we must have immediate response from every patriotic honey producer concerned about this program. There will be no obligation. Merely give us all the facts, wages (for experienced and apprentice), and season of work. Then when we receive communication through one of the above organizations in the name of a veteran, we can complete the contact. I hope you will act on this at once, sending the desired information to me here at Rt. 5, Box 181, Lansing, Mich.

Other members of the Rehabilitation Committee are: J. F. Reinhardt, Georgia Coastal Plains Experiment Station, who has been asked to cover the package bee phase of employment; and H. J. Rahmlow, 424 University Farm Place, Madison, Wisconsin, who will help co-ordinate the employment of those interested in commercial honey production. Our committee will also be glad to accept offers of employment from commercial honey packers, and apiary inspectors.

Let's put the Federation on the map by performing an outstanding service to veterans interested in our industry. We're counting on YOU!

—Elmer Carroll, Chairman
Rehabilitation Committee
National Federation of State
Beekeepers' Association.

ADDITIONAL GASOLINE POSSIBLE UNDER CERTAIN CIRCUMSTANCES

It occasionally happens that a beekeeper miscalculates the amount of gasoline necessary to travel to his outyards, or because of unfavorable weather conditions more trips to these yards are necessary than originally contemplated, or some other emergency requires more gasoline for essential trips. Under such circumstances, a beekeeper can apply to his local OPA Price and Rationing Board for a further gasoline ration on the basis of the following regulation taken from OPA Ration Order 5C (including Amendment 85), as issued November 23, 1943:

"Sec. 1394.8052 **Issuance of further ration for use before end of period of current ration.** (a) Any person who finds that a ration currently held by him fails to meet his requirements may apply for a further ration of the same class (except a basic ration) prior to the end of the period for which his current ration was issued, if his current ration is insufficient for any of the following reasons:

"(1) A change in occupation or in the location of place of business or residence, or other change in circumstances, or a seasonal variation in the amount of occupational mileage needed, or a miscalculation of needs."

The Gasoline Rationing Section of OPA has advised that the phrase "miscalculation of needs" is in itself sufficient reason for asking for a supplemental ration allotment, if it can be supported by the facts.

—Harold J. Clay, Chief
Honey and Peanut Section
Special Commodities Branch
Office of Marketing Services
War Food Administration

SECOND GLANCES

By C. M. Isaacson

Food and more food! That, along with good queens, seems to be the basic thesis of Mr. Jessup's article on spring management (page 185), and it is an excellent basis. We too often neglect it. His method of making increase and checking over apiaries shows before-handed planning, and efficiency in manipulation. Having only an easily handled amount of queens arrive each day—and keeping a reserve on hand later—are points to keep in mind. And his mention of utilizing the beekeeper's winter "rest" is well put—it is the time for preparation and putting things in order. Just a word as to emergency feeding, if bottom boards are tight, pour the syrup in them, tilting the hive slightly backwards.

Reversing and swarm control. The gist of Grant Morse's words (page 188) seems to be that reversing is an **aid**—not an absolute preventive. I believe most will agree with him here. In seasons when the swarming instinct is dominant, it will not be efficient, but it often can assist considerably—especially with weaker colonies.

Curiosity is the basis of discovery. Milton Felt's experiments with races of bees are to be commended in this respect. He partially brings out a point in connection with Carniolans (that is true of Caucasians also)—the difficulty of obtaining and keeping them pure—one point that has kept Italians in the forefront despite some superior characteristics of the darker races. And the Black Bee—to the Editor's caution, I would like to mention their tendency to rush madly in "all directions at once" when handled, a nuisance to put it mildly (page 189).

Producing more beeswax by alternating empty frames in supers is feasible (page 190). I have tried it, and from my experience can also say that the old idea of drone comb as storage space seems to be not too strongly supported. The full frames of drone comb that I saved over were always filled **last,** unless several generations of brood had been reared in them, when there was apparently little difference in comparison with worker comb. And—chew a bit of newly built drone, and then worker comb —I believe you will find the drone cells stiffer, which should seem to indicate the comb would be stronger.

Feeding pollen substitutes dry as Prof. Dunham describes (page 192) should be an excellent way to supply an apiary without much extra labor, except in an unduly cold spring. The feeder shown appears simple and with ample working space for the bees. Keep in mind two of his cautions—the substitute must be kept **dry;** and don't form conclusions from a single season's experience.

Not new plants but new sources of nectar (page 194). A good beginning for an informative article. Mr. Pellett has contributed a lot in his work, some evident now, and some, as always, that we will not realize until later years.

Bananas, pineapple, and strawberries! And blended with honey. That may not be exactly the gist of Mrs. Nielson's pages this month, but I shrank from reading farther! Don't you realize, Mrs. Nielsen, that you are getting us all het up when pineapple is "point high"? (It happens to be my favorite fruit.)

Again the admonition—feed! It can't be repeated too often—we all offend too much in this matter of keeping "millions at our house." Filling combs by the sprinkling method is excellent, but use a larger can. A common garden sprinkling can (two or three gallon size) is good. Use over an empty tub, combs will be filled speedily and the feed can be put where wanted (page 197).

No DDT released indiscriminately (page 201). That is welcome news. Yes, users of insecticides must take all possible care—and beekeepers be tolerant even when it hurts.

Swarming can be eliminated. Mr. Miller has proof, so his words are of real value. Demareeing can be excellent, with **strong colonies,** and of course we should have these in any case (page 205). With those not up to par it may not work as well.

Middle River, Minesota.

Talks to Beekeepers

By M. J. Deyell

A Day in June. No wonder the poet was moved to exclaim, "What is so rare as a day in June?" June is a glorious month in more ways than one. It is the month when a major portion of the surplus honey is stored in Northern latitudes, also a delightful month in which to enjoy life to the full.

A few Don'ts. In dealing with children it has been said that we should never use the negative approach but rather the positive. We all know about the mother who told her children not to put beans up their noses during her absence and when she returned she found that all the youngsters had done exactly what she told them not to do.

However, there are a few don'ts which should be emphasized, especially at this season of the year.

"Don't pinch queen cells unless you know what you are pinching." This, by the way, is taken from the March-April issue of the Illinois State Beekeepers' Association Bulletin which came to my desk a few days ago.

Isn't it a fact that we intinctively destroy queen cells when found? It is probably because we have had it drummed into us to destroy queen cells to stop swarming. I have kicked myself more than once for destroying a queen cell produced by a good colony of bees. The next hive examined might be queenless and there would be no young laying queen to introduce. How simple it is to take a comb containing a nice queen cell and place it in the center of the brood chamber of a queenless colony. In a relatively short time a virgin queen will emerge, in due time mate, barring unfavorable conditions, and begin laying.

The presence of queen cells does not always indicate swarming. Quite often they mean natural supersedure. When one finds a few queen cells (usually not more than three or four are built in the middle of the combs somewhere near the center of the brood chamber), these are likely to be supersedure cells. If the queen is found she may be rather inferior in appearance and her laying rather spotted and irregular. If one has a good laying queen on hand, the old queen, also the cells, may be destroyed and the new queen introduced. However, if no laying queen is available, the supersedure cells should be left in the hive.

Quite often the old queen will be tolerated, even after the young queen has begun laying. It is not uncommon to find both mother and daughter in the same hive on the same comb. The late George S. Demuth, former editor of this journal, told me that he once found a young queen, her mother, also her grandmother, in the same hive.

When swarming cells are found (these are usually built on the bottom edges and ends of brood combs, about a dozen or more) they should be destroyed unless, perchance, one has use for some of the cells, as, for example, starting nuclei to rear some young queens. This year we are having some extra hives in each yard for rearing young queens during the height of the season so that they may be available when needed for requeening.

Swarm cells are likely to be found just prior to or at the beginning of the major honey flow, when there is an abundance of young bees and brood. We have found that one way to stop swarming when such conditions prevail is to remove all of the queen cells from the colony, put all of the combs of brood except one into supers above the queen excluder. This one comb of brood with the queen is left in the lower chamber with frames containing full sheets of foundation or empty drawn combs. This separates the queen from the brood, relieves congestion, and in most cases stops swarming.

Don't guess about stores. During early June, in some parts of the North, just before the major honey flow starts, beekeepers should be absolutely sure that all colonies have enough stores. Occasionally a cool wet spell prevails just before the main flow begins and this makes matters worse. It certainly pays to examine the brood chambers to see if the bees have enough honey. If they haven't they should be fed combs of honey held in reserve, if available, or sugar syrup. Beekeepers who make a practice of leaving

a well filled deep super, or food chamber, on each colony from the previous season, in addition to what honey may be in the bottom chamber in the fall, do not, as a rule, have to worry about stores.

Don't divide colonies too early or too late in the season. It is possible where and when conditions are favorable to divide some very populous colonies in the spring about fruit bloom time. If the divisions are given efficient management they can be built up sufficiently strong in bees to store a surplus. Often, however, the divisions fail to build up and consequently the owner secures less surplus honey than he would have secured had he not divided the colonies. It has been found that one very populous colony will store more surplus honey than two weaker colonies.

Some beekeepers also make the mistake of dividing their colonies too late in the season. When this is done the divisions may fail to build up to maximum strength and are lost during winter or early spring.

The best time to divide colonies, when increase is desired, is at the beginning of the main honey flow. If this is done judiciously it is possible to secure some surplus honey as well as additional colonies. However, dividing colonies does reduce the crop of surplus honey.

Don't temporize with AFB. During these days when we hear so much about disease resistant queens and drugs for curing AFB, there may be a tendency on the part of some beekeepers to experiment with diseased colonies instead of disposing of them in the orthodox fashion. I believe in experimentation but it seems to me it should be done by those qualified to do it properly.

After long years of experience with AFB I have found that it does not pay to temporize with this disease. After I decided about 15 years ago to destroy a colony with Cyanogas the day the disease is found, burn the contents of the hive in a deep pit, then cover the ashes thoroughly, saving the hive if worth saving by scorching the inside to a light brown color, AFB has not made any headway in our apiaries. It took a long time to learn this but I think I have learned it thoroughly. Those who have the 1923 volume of Gleanings may be interested in reading the article "High Cost of Foulbrood," on pages 787 to 790.

Don't put off giving supers—early. We used to think that supers should not be put on until the flow begins. So long as supers of drawn combs are used, they may be put on a week or so in advance of the time they are actually needed. This procedure tends to provide ventilation for bees and it gets them started going up into the supers. This relieves congestion in the brood chamber. If, however, supers with full sheets of foundation are put on before the flow starts the bees may chew holes in the foundation.

As stated in last month's Talk, we aim to put at least one super of drawn combs on each colony during the fruit bloom honey flow. If the colony is strong we put on two supers. When the main honey flow starts, we put on more supers. When this is done in plenty of time the bees have comb space for the storage of incoming nectar. This relieves congestion and is a swarm control measure.

Feeding pollen substitutes. We finally secured some dry skim milk and soybean flour. During the early pollen flow the bees would not look at soybean flour placed in the hives or near hive entrances. During the recent cool spell, we made up some cakes of pollen substitute and placed these on the inner covers with the center blocks removed. Some cakes were placed on pieces of oil paper, directly over the brood frames, with the inner covers inverted. The bees appear to be taking the pollen substitute but we have not carried the experiment far enough to determine the value of these substitutes.

A colony ready for the honey flow and "raring to go".

Editorials

Crop Prospects Not for a number of years have prospects been more favorable for a crop in the clover regions. Deep snow protected plants during the winter. Copious rains have soaked the sub-soil. A few clover heads were found in early May around Medina. Cool wet weather has given plants time for normal development.

It would seem that beekeepers with colonies in the pink of condition may be due for a good crop. However, we dare not prophesy. Time will tell. If ever our industry needed a good crop it is this year.

Stumbling on to Short Cuts Some of the most valuable short cuts in apiary management have been stumbled on to accidentally. For example, the use of the food chamber was discovered by the late George S. Demuth prior to 1920. There may have been others who used the food chamber hive, but at least Mr. Demuth brought it out into the open.

It happened something like this: Mr. Demuth was operating about 200 colonies for the production of comb honey, near his home at Peru, Indiana, while working in Washington, D. C., at the bee culture labratory under E. F. Phillips.

One fall Mr. Demuth did not have time to remove the filled supers of honey on top of the lower brood chambers. He worried all winter long and naturally wondered how the bees would get on. In the spring, lo and behold, all colonies were boiling over with bees. After that experience he wintered in two-story food chamber hives.

Well Filled Deep Food Chamber Advantageous During the past three weeks (this is May 18) bees in this vicinity have had little opportunity to collect pollen and nectar due to cool rainy weather.

Most of the fresh pollen collected in early spring has been used up in brood rearing. Colonies with an ample supply of honey left on the hives from last fall appear to be in good condition, in fact, many such colonies are now ready for the clover honey flow.

When colonies kept in hives by cool rainy weather are forced to use up honey from last season, they uncover pollen that was packed in the cells at that time by the bees for future use. Cells used for storage of pollen are about half filled, then honey is placed on top of the pollen. What a marvelous provision to keep pollen fresh until it is uncovered and used, when needed.

All of our colonies have deep food chambers. When these are well filled in the fall we do not as a rule, need to worry about stores at this time of the year.

An adequate supply of honey for each colony helps to insure a good supply of pollen, in regions where it is available. The proper use of the deep food chamber is one way to help insure a good supply of honey and pollen, also populous colonies ready for the major flow.

It is well to err on the side of safety by having too much rather than not enough stores for each colony. An over-supply of food is never lost or wasted. It means that much less for bees to store.

Don't Experiment on too Large a Scale Some beekeepers are given to experimentation, a desirable trait, if not carried to excess. None of us should be satisfied with present attainments, but should be on the alert for new ideas, new and better ways of managing bees.

We should try experiments to determine, if possible, whether our present methods and equipment can be improved. It may take more than one season to find this out.

Some beekeepers are prone to experiment on too large a scale. This, we feel, is a mistake. We are or should be interested in securing the maximum crop of surplus honey. If, perchance, we use most or all of our colonies for experimental work, and, because of our failure to thoroughly understand the principles underlying the experiment, fail to secure surplus honey, we have ourselves to blame.

Experiment on a moderate scale and be sure to have some check colonies alongside of those used in the experiment. Things are what they are by comparison, always.

Honey is Honey It would be interesting to have a collection of honeys from major sources on this continent. Some people like some flavors and others like other flavors. There are many flavors and colors. Honey from any particular source gathered in one region varies from year to year, both in color and flavor.

During a rapid flow the quality is likely to be better than it is during a slow or intermittent flow. Weather and atmospheric conditions appear to affect flavor and color.

During the past few years when white honeys have been none too plentiful, some people who think they like only white honeys have been induced to try and in some cases have learned to like dark honeys.

Generally speaking, people accustomed to dark honeys have developed a liking for them and the same is true of white honeys, especially clover honey.

When we think of clover honey do we mean honey from white Dutch, alsike clover, sweet clover, or alfalfa? In most clover regions where all the aforementioned clovers grow the honey secured is a mixture.

It would seem that the quality of honey should not be based on color but rather on flavor. But if one person likes one flavor and another person likes another flavor, what then?

Honey is honey regardless of flavor and color, provided it is properly produced and by that we mean it should be left on the hive long enough for bees to ripen it properly. Obviously it should be properly handled from the time it leaves the hive until it reaches the consumer.

Looking Ahead Even though our industry has made considerable progress, especially since Langstroth invented the movable frame, self-spacing hive in 1852, almost 100 years ago, it seems apparent that our industry is headed towards a new era, one that will perhaps make past progress seem rather insignificant.

Motor transportation has facilitated out-apiary management during the past few decades. In the near future the airplane of the helicopter type may come into use for transporting bee equipment and hives of bees to and from outyards, also for migratory beekeeping. It may be feasible in the near future to move entire apiaries by plane from the North to the South in the fall, then back to the North in time to catch the major honey flows during the following season. If and when this does happen, the problem of providing ample ventilation for bees enroute should not be a major one.

The products of the hive, honey, wax, pollen, and propolis are likely to be in greater demand than ever before. Honey, nature's oldest, choicest sweet is being recognized as never before as an important food, not merely another sweet. Our American Honey Institute is doing a marvelous piece of work in popularizing honey. Beeswax is in demand at the present time and will continue to be found useful in many fields. Pollen, aside from being used as a food for young bees, will doubtless have other uses. Propolis, which has curative qualities, is now being used as one of the ingredients in an antiseptic salve.

Honeybees are considered essential, in fact, indispensable to agriculture, for pollination purposes. The rank and file of beekeepers fail to realize the important role the honeybee plays in food production. At present, when food is needed so urgently, more bees are necessary to pollinate legumes so essential for soil enrichment.

It has been said on good authority that approximately 90 per cent of the nectar now available goes to waste annually for the lack of bees to gather it. There is only one hive of bees for each approximately 250 acres of land in this country. That does not include bees in trees, hollow rocks, and sidings of buildings. The estimated number of colonies of bees in the U. S. A. is 5,219,000. It would seem that at least five times as many colonies could be kept in this country to advantage without overstocking. It is difficult to increase the number of colonies of bees rapidly. This will have to be a gradual process. As the number is increased, so will the demand for honey increase.

All in all, the future of our industry appears to have marvelous possibilities.

Asked and Answered

What Happens When a Swarm with a Clipped Queen Returns?

Question.—What takes place in an outyard bee colony when that colony, having a queen with clipped wings, swarms with no attendant present? The swarm bees return to the original hive; the queen, in all probability, also finds her way back to the mother hive. But then what occurs? Does this swarm again issue the following day or the second day following and does the swarm and clipped queen again return to the mother hive? If so, how long does this go on? If this swarm issues only once or twice and returns each time to the mother hive, does the queen and the swarm bees finally decide to stay and destroy all queen cells or swarming cells, or does a newly hatched virgin issue forth with a swarm?—J. T. Briggs, N. Y.

Answer.—At least more than one thing can happen when a swarm issues from a hive having a clipped queen during the absence of the owner of the bees. The swarm, not being accompanied by the queen because she cannot fly with them due to her clipped wing, will naturally return to the hive from which they issued. In some instances, the clipped queen may not find her way back into the hive, especially if the hive is on a stand elevated some distance from the ground. If the hive is resting on the ground she will usually get back into the hive. Under these conditions the swarm is likely to issue a second time and if by this time a virgin queen has emerged, she is likely to kill the old queen when she returns to the hive a second time. At this point it is a little difficult to determine what will happen, whether the virgin queen will lead off a swarm, or destroy the remaining virgin queens in their cells before they emerge, and then becomes the mother of the entire colony. Of course, this virgin queen has to go out on her mating flight. When this happens a colony populous in bees may attempt to swarm at the time the young queen goes out to mate. Usually, however, a part of the bees will follow the young queen a short distance, then return to the hive. If the clipped queen does not or cannot return to the hive with the bees, the first virgin queen that emerges is likely to become the mother of the colony in due time. If, however, the colony is congested due to lack of comb space, this virgin queen may lead off a swarm and another virgin queen will emerge and become the mother of the bees that are left. It is difficult to say what will happen in all cases as conditions that prevail have a definite bearing on bee behavior. Some years ago we used to hear considerable about after swarms. Such swarms do not seem to be so common nowadays. Of course, after swarms would not come out when the parent hive is set onto a new stand some eight or ten feet away and a new hive placed on the old stand to contain the prime swarm.

Manipulating Food Chambers

Question.—Is a newspaper or a bee escape used between food chambers during the honey flow, before piling them on top of each other or otherwise separating them and combining them?—Frank C. Zanzig, Wisconsin.

Answer.—We have performed various manipulations in handling food chambers, such as lifting them off the parent hive and putting them on other hives, or piling them up, four or five high, on a weak colony. We have never placed sheets of newspaper between the hives. Of course, this work is done usually during a honey flow, at which time bees are not likely to fight each other. When food chambers are set back on the parent colonies later in the fall, during late September or early October, it has been found unnecessary to use newspapers to prevent the two lots of bees from fighting.

Clipping the Wings of a Queen

Question.—What is the procedure in clipping the wings of a queen?—Henry Glavick, Ohio

Answer.—If you are righthanded the queen should be grasped by the wings, using the thumb and index finger of the right hand. She should then be transferred to the left hand and held by the thumb and index finger, permitting the thorax and abdomen of the queen to rest on the second finger so that the wings protrude. A small pair of scissors are then used in the right hand to clip about one-half of the long wing on one side diagonally. The shorter wing does not need to be clipped. This clipping will prevent the queen from flying.

Spinster Jane Says

If every spring were like this,—well, even Boy with all his optimism, would feel like getting rid of his bees.

According to a general belief, Good Friday hands us out the type of weather we may look for for forty days—until Ascension Day, in fact, and this year it has turned out that way. Even the announcement of that long-looked-for V-E day has failed to warm up the weather, though it did warm up our hearts and give us fresh courage to carry on.

Here in our community, the day it was announced, we had a service of thanksgiving in our little church, and men, women, and children left school and their various occupations to turn out en masse to join in that thanksgiving. I think tears were more common than laughter, and spoke of a deeper joy.

All week it has been very cold. We still have that high wind, and with it, for three days in succession, we have had squally weather with snow, instead of rain.

Boy came home yesterday, and was almost desperate. His bees had wintered beautifully, and now the cold continuing as it is, is weakening the colonies badly. He had to get a permit for a second bag of sugar to keep them from starving, and he finds them greatly weakened. Just last night he scooped up a handful of chilled bees at one hive entrance, and they quickly came to life when brought into the warmth. Valiant little workers! They were venturing forth into the cold and wind to search for food for their young. There is certainly no lack of courage, no giving up, with them. They teach humans a wonderful lesson right there.

We are looking forward to warmer weather, and that soon. Already frost has caused much loss for us. Cherry, chokeberry, and other fruit blooms were out, and we were congratulating ourselves that this year would see a bumper crop of our staple fruit, blueberries. The bushes were covered with buds, as are the wild plum trees here in our bee yard. For the first time our lilac bushes, nursed carefully, were a mass of buds. Alas! These buds were not tightly rolled enough to protect them from frost. They are blasted and drying up, but we do hope the plums and blueberries may not be hurt in this way. Besides being our most common and staple fruit, blueberries are marketable, and many families make good money, picking and shipping them to the city markets.

Dandelions are just beginning to bloom in sheltered corners, and a little sunshine and warmth would coax them out in thousands, and give the bees food right at their very doors. We have been promised seed time and harvest, so must take God at his word and not be discouraged but keep on trusting and hoping.

Should our northern honey crop be a failure, we hope that of those farther south may be a success. With sugar rations to be further cut, honey is surely essential.

WPB EMPHASIZES RESTRICTIONS ON THE USE OF DDT

Dr. J. S. Houser, Wooster (Ohio) Experiment Station, in addition to what he wrote on page 201 of the May issue of this journal, refers us to a short article that appears in the May issue of the Agricultural Insecticide and Fungicide Association publication, which we quote:

War Production Board is reiterating its warning that DDT released to civilian this year is solely for experimentation.

Nevertheless, a WPB spokesman reveals "several instances where it would appear that efforts have been made to interpret the regulation to cover more than purely experimental programs."

He adds that "in our efforts to continue to justify quantities of material for agricultural experiment (which must be taken from military supplies) we must have the assurance that the real intent of regulations is being observed.

"If DDT released for experimental purposes is used otherwise, it is contrary to regulations and may require the attention of our Compliance Division."

Violations of the order, we take it, would mean severe penalties.

Just News

Lt. Herman Chas. Short, Jr., son of Mr. and Mrs. H. C. Short, of Fitzpatrick, Alabama, well known bee shippers, was killed in a crash of his plane recently. Lt. Short had completed nineteen missions over enemy territory in the Pacific area, having received a medal for outstanding service. He is survived by his wife and parents.

The Middlesex County Beekeepers' Association will meet at 2 p. m., on Saturday, June 30th in the herb and bee garden of Mrs. Hollis Webster, 1960 Massachusetts Avenue, Lexington, Massachusetts. Mrs. Webster will give out lists of honey plants, and show the bees at work on the various herbs in bloom. The beekeepers will bring their picnic suppers, cups, plates and spoons for hot coffee.—H. R. Stevens, Pres.

The Bermuda Beekeepers' Association held its annual meeting on April 19 at Paget East, with Dr. R. L. Parker, State Apiarist of Kansas, also Professor of Entomology at the Kansas State College, as guest speaker. Dr. Parker is on a three months' leave of absence investigating injurious insects attacking Bermuda cedar.

P. G. Craddock has resigned his position as State Inspector of North Carolina and has accepted the position of Extension Entomologist of Georgia.

Walter Glebe of Delaware Water Gap, Pennsylvania, a bee inspector for several years passed away in early January.

A Correction.—In Who's Who in Apiculture, page 212, May issue, the correct name and address of the state bee inspector for Rhode Island is Howard A. Pike, Conimicut, R. I. Also the state inspector for New Jersey, is Paul L. Holcombe, R.F.D. Lambertville, N. J.

An Evening Course in Beekeeping now in progress is sponsored by Alameda County (California) Beekeepers' Association and is held in the Technical Evening High School, Oakland, California, of which F. M. Yockey is Principal. Mr. Lee Watkins, an experienced beekeeper, is instructor. This is a commendable project for an association.

Beekeepers from Hamilton County and adjacent territory completed the permanent organization of the Southwestern Ohio Beekeepers' Association at a meeting held at Glenview School, near Glendale, Ohio, on Saturday afternoon, May 12th. Officers elected were Dr. Frederick Swing, President; E. J. Wuest, Vice President; Carl R. Bibbee, County Agricultural Agent, Secretary; Clifford Snodgrass, Treasurer. There is definite record of 593 beekeepers in Hamilton County who in 1943 and 1944 operated 3667 colonies of bees.

Johann L. Lauritsen of Kennard Nebr., operates some 700 colonies of bees with the part time help of only one high school boy. In spite of the fact that beekeeping is still considered an essential agricultural activity, Lauritsen was recently ordered by the local selective service board to report for induction into the army. Mr. Lauritsen has two brothers already in the service.

The Bronx County Beekeepers' Association will hold its regular monthly meeting on Sunday, June 10. at 2:30 p. m., at the home and apiary of Harry Goldner, 3319 Palmer Ave., (Off Boston Post Road). There will be an examination of Mr. Goldner's hives. Guest speaker will be Dr. E. F. Phillips. All interested in beekeeping will be welcomed. Refreshments will be served.—Harry Newman, Sec.

Muskegon and Kent County (Michigan) Beekeepers' Association will hold their annual meeting July 25 at Grand Rapids, Mich., in Johanson Park.—N. J. Smith.

The New Rochelle Beekeepers' Association will hold its regular monthly meeting at the home of Mr. and Mrs. James A. Bailey, 18 Burling Lane, New Rochelle, N. Y. on Sunday, June 17th at 2:30 p. m. Adding supers for the summer honey flow will be the topic open for discussion. Members are urged to make use of the question box. —A. M. Barnes, Ass't. Sec.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 8 cts. per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding.

HONEY FOR SALE

HONEY FOR SALE—We buy and sell all kinds, any quantity. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich St., New York.

FOR SALE—250 five gallon cans of good clean imported honey. Color light to light amber. Body heavy, flavor mild. 15½ cents here. CLOVER BLOSSOM HONEY CO., WILKES-BARRE, PA.

FOR SALE—Buckwheat and fall honey in 60-lb. tin cans. Any quantity from can to carload lots. Cloverdale Honey Co-op., Inc., 113 Central Ave., Fredonia, N. Y.

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

HONEY FOR SALE—We buy and sell all varieties. Buckwheat, 10c. 1945 southern light amber honey, 12c. We also have a complete line of glass honey jars. Bizzy Bee Ranch, No. Abington, Mass.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C. O. D. terms except where the buyer has thoroughly established his credit with the seller.

WE PAY CASH for extracted clover honey. Fairfield Honey Company, Millersport, Ohio.

COMB HONEY WANTED—State how packed and the quantity you have. Frank H. Hauck, P.O.Box 84, Kew Gardens, N. Y.

HONEY & BEESWAX. Highest prices paid. Mail samples. Advise quantity. BRYANT & COOKINHAM, LOS ANGELES, CALIF.

HIGHEST cash return made the day we receive your beeswax. Write for shipping tags and quotations. Walter T. Kelley Co., Paducah, Kentucky.

CASH FOR YOUR HONEY—Extracted or comb. Regular trade, send sample, 60 lb. cans furnished, if desired. W. R. Moomaw, Stone Creek, Ohio.

WANTED—All grades of comb and extracted honey. Bee supplies and honey containers for sale. Prairie View Honey Co. 12243 12th St., Detroit, Mich.

WANTED—White and amber honey; any amount. D. F. Treap, 317 Keenan Ave., Cuyahoga Falls, Ohio.

HONEY WANTED—All grades and Varieties. Highest Cash Prices Paid. Mail Samples. State quantity. HAMILTON & COMPANY ,1360 Produce St., Los Angeles, Cal.

Have you glassed honey, or honey in 60-lb. tin cans either white or light amber, that you have no sale for? If so, write TOWNSEND SALES COMPANY, Northstar, Michigan.

CLOVER HONEY WANTED—Large or small lots. Would like to establish permanent connections with several good producers. Ellsworth A. Meineke, Rt. 1, Arlington Heights, Ills.

HONEY WANTED—300,000 lbs. of honey we packed last year. We need that much for 1945 also. A postcard will bring our truck. If you sell without writing us, we both lose, because we pay top prices. You'll do better with the ALEXANDER COMPANY than with a distant corporation. Send your card today to the ALEXANDER COMPANY, 819 Reynolds, Toledo 7, Ohio.

FOR SALE

FOR SALE—Honey pump, price $20.00. Merl Harrington, Benton. Pa.

QUEENBEE PAINTING outfits, $1.00, colony records, 10-15c postpaid. Southwick Apiaries, Waban, Massachusetts

WRITE FOR LOW CASH PRICE glass jars. Complete stock. Prompt shipment. Roscoe F. Wixson, Dundee, New York.

Synchrome Aluminum Paint for bee hives. Gallons only, $4.25, cash with order, F.O.B. Fort Atkinson, Wis., G. L. Saur.

YOUR WAX WORKED into high quality medium brood foundation at 16c a pound; 100 pounds, $12.00. Medium brood foundation for sale at 70c a pound. Fred Peterson, Alden, Iowa.

SEND FOR CATALOG of electric heaters, thermostats, and supplies for heating your hives next winter. D. F. McFarland, Research Engineer, 109 W. Geneva Lane, Oak Ridge, Tenn.

100 Danz hive bodies, 40c each; comb honey supers, 10-fr. 80c; 8-fr. 65c; 2, 4, and 6-fr. extractors; 200 glass front shipping cases, 18c; 10-fr. hive bodies, 80c; 8-fr. 60c. Other new and used equipment. C. B. Howard, 59 Lyceum St., Geneva, N. Y.

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

WANTED--Extracted Honey All Varieties
One can or a carload—what have you? Mail your offerings and samples to us. Prompt action—Cash on delivery.
JEWETT & SHERMAN COMPANY
Lisbon Rd. & Evins Ave., Cleveland 4, O.
1204 W. 12th St., Kansas City 7, Mo.

MOORE'S STRAIN

Away back in 1879, I commenced rearing Italian queens with the object of improvment constantly in view. By careful selection during all these years I have succeeded in producing a strain of three-banded, leather colored Italian bees known as Moore's Strain of Italians which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Send for descriptive circular and read reports from those who have tried them. Untested queens, $1.25 each; 6 for $7.00; 12 or more $1.00 each.

J. P. Moore, Rt. 3 Falmouth, Ky.

Former address, Morgan, Kentucky
Safe arrival and satisfaction guaranteed

2-lb. pkg. $3.50
3-lb. pkg. $4.50
Queens ..... $ .90

WRITE FOR DISCOUNT

J. P. CORONA
Box 124, Kenner, La.

CAUCASIAN QUEENS

For June, July and August at $1.15 each, any number. Good queens—good service.

BOLLING BEE COMPANY
BOLLING, ALABAMA

ITALIAN QUEENS

Three-banded, Northern bred, for business.
Safe arrival by return mail.
48TH BREEDING SEASON
Untested, $1.00; 6, $5.50; 12, $11.00.
Select, $1.25

I. F. MILLER, Warren, Pa., Rt. 3

SAVE MONEY by letting us work your wax into wired regular comb foundation. Large catalog describes everything. You pay only wholesale factory prices as we have no agents. Walter T. Kelley Co., Paducah, Kentucky.

WRITE FOR CATALOG Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

SOMETHING NEW — INSTANT NINE FRAME SPACERS. Fast, accurate, indispensable. Fat combs; Easy Uncapping; More honey. Set does all supers, $1.50, postpaid. George Leys, 48 Drake Ave., New Rochelle, N. Y.

A new Combined CONTROLABLE FEEDER AND SWARM CONTROL. Useful also as inner cover, bee escape and robbing preventive board in queenlessness and drying wet combs; as winter top entrance and pollen feeder. Sample with directions postpaid, $1.95. 5 (not assembled nor prepaid) for $8.00. NICOLLET COUNTY NURSERY, St. Peter, Minn.

BEES AND QUEENS FOR SALE

GLEANINGS cannot guarantee that all bees advertised for sale in our classified columns are free from bee disease. We use all possible care in accepting advertisements but we cannot be held responsible in case disease appears among bees sold. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

FOR SALE—Italian queens. Graydon Bros., Greenville, Ala., Rt. 2.

GOOD ITALIAN QUEENS, carefully raised, $1.00 each. D. W. Howell, Shellman, Georgia.

FOR SALE—Quality three banded Italian queens, price $1.00 each. A. M. Peach, Baldwyn, Miss.

NORTHERN-BRED Italian Queens, ready after June 20th, $1.00 each. Shirl Baker, Rodney, Michigan.

CAUCASIAN BEES — 2-lb. pkg. $4.10; 3-lb. pkg., $5.10. Booking orders now. Lewis & Tillery Bee Co., Greenville, Ala.

GOLDEN ITALIAN queens, any number, $1.25 each. Carolina Bee Farm, W. O. Curtis, Mgr., Graham, North Carolina.

HONEY-FLOW QUEENS — Northern Queens reared under the best conditions, try them. $1.00 each. GREULICK & SON, ALTAMONT, N. Y.

FOR SALE—My entire bee business, on account of failing health. Certificate of inspection will be furnished at time of sale. J. J. Wilder, Waycross, Ga.

ASSURE maximum crop with our gentle hardy Italian queens. $1.25 each, any quantity. Golden Girl Apiaries, P. O. Box 1468, Mobile 8, Alabama.

ITALIAN QUEENS for May and June delivery, bred from high producing stock. None better, $1.00 each. W. A. Fletcher, Garland, Texas.

IMPROVED ITALIAN QUEENS, $1.00 from a strain that produced over 600 lbs. of honey per colony. Henry Loehr, Jr., Caldwell, Texas.

PACKAGE BEES, QUEENS — Italian. Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

SELECT ITALIAN QUEENS—If you are particular about queens, I ship the kind of queens you want. "No fooling." $1.25 each. J. H. McCartney, Piru, Calif.

ITALIAN QUEENS good as the best in every respect. Prompt service, $1.10 each; $12.00 per dozen. The Victor Apiaries, 6016 Michigan Ave., R. F. D., Belleville, Michigan.

PACKAGE BEES with young laying Caucasian queens, 2 lb. package, $3.80; 3-lb., $4.80. See us for queens after May 31, $1.00 each. Formerly Miller Bros., now write Miller and Evans, Three Rivers, R. 1, Tex.

REAL PETS—Brown's non-stinging bees can be handled without smoke and veil, regardless of weather conditions, good honey gatherers. Only queens sold. Price this season, $1.25. Brown's Apiary. Cape May COURT HOUSE, N. J.

GREEN'S profit-producing queens will please you as they have hundreds of others. Famous the country over. Where could you do better? Price 75c each after June 15th for rest of season. D. P. Green, Deland, Fla., R. 2.

NORTHERN QUEENS from prolific Italian breeding stock selected for honey production and gentleness. Available around June 1. Untested $1.00 any number. Booking orders now. Barger Apiaries, Carey, Ohio.

THREE-BANDED ITALIAN QUEENS—fine honey producers, and easy to work with, 1-25, $1.25; 25-50, $1.20; 50-up, $1.15. Health Certificate with every order. Alamance Bee Company, George E. Curtis Mgr., Graham, North Carolina.

EARLY PACKAGE BEES.—Prompt shipment begins May 1. 2-lb. packages and queen, $5.00 postpaid; 3-lb. package and queen, $6.50 postpaid. Choice Italian queens, $1.25. Safe arrival guaranteed. Birdie M. Hartle, Reynoldsville, Pa.

The Norma Roy Apiaries. We can ship Italian bees with or without queens. 3 pounds with queen, $4.00; 2 pounds with queen, $3.25. Queenless packages deduct 70c. Live delivery and a health certificate with shipment. Norma E. Roy & Son, Hessmer, La.

FOR SALE—325 colonies Italian bees, 75% Aug. and Sept., 1944 queen; certificate of inspection furnished. In standard 10 frame metal cover hives, 1½ and double story. 30 frame Woodman extractor and Brand capping melter. Ford V-8 and trailer. Selling on doctor's advice. Gerald Wunsch, Ada, Michigan.

FOR SALE OR LEASE—The entire holding of Hyland Apiaries, Sylvester, Ga., and West Elkton, Ohio, consisting of 6000 hives of bees, equipment for honey production and package bees. Certificate of inspection furnished at time of sale. Factory buildings, wood working plant, foundation and wax refining plant. Boats, barge, land trucks, etc. Annual turnover, $100,000.00. Alan Eby, Owner, Sylvester Ga.

A LIMITED NUMBER of choice Italian Queens produced in perfect environmental conditions, with the following equipment. Electric heated cell bars, electric heated

CAUCASIANS

Extra gentle, prolific, long tongue, little inclined to swarm, dependable workers - 10% to 40% ahead of the average Italians. Foundation stock from the mountainous region of Terek, Caucasus.

CARNIOLANS

Build up rapidly even during unfavorable springs. Prolific at all times, very gentle, best of workers, 34th year with them.

Prices: Untested queens, ... $1.00 each
Tested queens ..... 1.75 each
Tested queens ready about June 20th
Queens by Air Mail 6c extra per queen.

Albert G. Hann, Glen Gardner, N. J.

ITALIAN PACKAGE BEES AND QUEENS

Queens, $1.25 each
2-lb. pkgs. with queens, $4.00
3-lb. pkgs. with queens, $5.00

For less than a 25 package order of bees, add 25 cents per package to the above price. 4% extra queens with each shipment.

JOHN S. SHACKELFORD
Live Oak, California

Rossman & Long

Box 133 Moultrie, Ga.

Wish to thank all who have been so patient and understanding in our effort to deliver your bees under war conditions, as well as those who have not been able to get bees from us. We hope in the future to be able to supply more PACKAGE BEES with even better delivery service.

There have been some delays which were beyond our control that upset the entire spring schedule. We sincerely hope you were not badly put out by this and will remember the labor shortage hit us also. We expect to ship bees next year and will look forward to your order next January.

NORTHERN BRED LEATHER COLORED ITALIAN QUEENS
From Stock Bred for Resistance.
(Our own strain)
$1.00 ea.; 25 or more, 90 cents ea.
DIEMER BEE COMANY
Rt. 2, Box 7 Liberty, Mo.

BUY U. S. WAR BONDS

Queens

75c each

any number—
by return mail

Health Certificate Furnished
Bright 3-Band Italian bees and queens of highest quality. Purely mated. Safe arrival and satisfaction guaranteed. Packages express collect.

NO STAMPS ACCEPTED

Untested Queens	$ .75
Tested Queens	1.50
2 lb. pkg. with Queen	3.00
3 lb. pkg. with Queen	4.00

John A. Norman

ROUTE 2 **Ramer, Ala.**

Italian Bees and Queens

We still have a few packages that are not booked and an unlimited number of queens for the latter part of May and June.

	1-5	6-25	26-up
2-lb. pkg.	$4.00	$3.90	$3.75
3-lb. pkg.	4.85	4.65	4.50
4-lb. pkg.	5.85	5.65	5.50
5-lb. pkg.	6.80	6.60	6.45

Queens: 1-5, $1.00, 6-up, 90c

Get our line bred Italians noted for their prolificness, livability and vigorousness. Health certificate guaranteed.

B. J. BORDELON APIARIES
Moreauville, La.

ITALIAN QUEENS

Bred by Hollopeter from best honey storers, which are all right in other respects. Untested queens, $1.00 ea.; Tested, $2.00 ea.

WHITE PINE BEE FARMS
Rockton, Pa.
Breeders of Italian queens since 1911.

AMERICAN BEE JOURNAL

Hamilton, Illinois

Oldest bee journal in the English language. Keep up on markets, practices, scientific data, regulations, plant possibilities.

Two years, $1.50—Order today!

and air conditioned starting and finishing colonies. Mated from Baby Nucs with both electric heaters and fans with thermostat controlled temperature and humidity. Queens produced with this new equipment and in such optimum conditions will surpass your expectations in all respects. We have a small experimental or pilot queen yard and can produce only 600 queens per month until the demand will justify the expansion. Your trial order will be greatly appreciated. We are offering these unusual producers at $1.00 each. The entire proceeds from the sale of queens will be used to help defray the cost of past and future research in the first major progressive improvement in apiculture since Langstroth. D. F. McFarland, Research Engineer, Solon, Maine.

EXTRACTORS FOR SALE

FOR SALE—Simplicity extractor, 20-frame, $50, in good condition, not crated. Wanted 30-frame Woodman. State price. R. E. Cook, Renwick, Ia.

FOR SALE—32-frame radial extractor, home-made and honey pump. Both in good condition. Charles Bangham, 194 E. Fair Ave., Lancaster, Ohio.

WANTED

WANTED—Saxophones or band instruments. W. S. Frazeur, 505 N. Foster Ave., Lansing, Michigan.

WANTED—Root Simplicity 45-frame extractor. Late model preferred. E. E. Salge, Strandquist, Minn.

WANTED—A Pfund honey grader. D. H. Lee, Mgr., Finger Lakes Honey Producers' Cooperative, Inc., Groton, N. Y.

TO BUY double boiler for processing, honey pump and steam boiler. Musgrave Apiaries, Iron Mountain, Michigan.

SUPPLIES

SAVE ON LEWIS-DADANT BEE SUPPLIES AND HONEY CONTAINERS IN MINNEAPOLIS. Send list of needed supplies for quotation. Prompt shipment made from large stock. Top prices paid for honey and beeswax in cash or trade. HONEY SALES COMPANY, 1806-08 No. Washington Ave., MINNEAPOLIS 11, MINNESOTA.

USED EQUIPMENT

2-20-frame Root extractors; 1 Brand melter; 2000 10-frame Dadant shallow extracting supers with frames; 180 11-frame Dadant extracting supers with frames; 200 10 frame Standard hive bodies with frames; 240 10-frame Jumbo hive bodies with frames. This equipment all in good condition, thoroughly cleaned, reasonably priced. Sioux Honey Association, Sioux City 6, Ia.

FOR SALE—400 good used five gallon honey cans, 35c a case. W. Mendenhall, Moorestown, N. J.

FOR SALE—Comb honey equipment, supers complete. Mrs. Vera Loop, 203 So. Williams St., Paulding, Ohio.

FOR SALE—25 10-fr. used hive bodies with supers, factory made, painted, metal telescope tops. Good condition. Elba E. Brown, R. 4, Veedersburg, Ind.

FOR SALE—Complete apiary equipment. Hives, thousands of drawn combs, Root 45-fr. extractor, tanks, cans, bees, etc. Certificate of inspection furnished at time of sale. William F. Vollmer, Akron, N. Y.

TANNING

TAN your deerskins, sheepkins, etc., Indian style. Details free. Wickizer, 564-B Hooper Rd., Johnson City, N. Y.

MAGAZINES

MANY BEEKEEPERS have proven rais ing fox, mink, nutria, muskrats, rabbits, highly profitable. Send dime for sample copy. Canada's oldest fur farming magazine tells how. Fur Trade Journal of Canada. Box 31, Toronto 2, Ontario.

WESTERN CANADA BEEKEEPER, official organ of the Manitoba Beekeepers' Association. One year, $1.00; in combination with one year's subscription to Gleanings in Bee Culture, $1.75. Wallingford Building, Winnipeg, Canada.

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy free. Yearly, 7s, 6d., International Money Order. Apply Editor, Indian Bee Journal, Jeolikote, Dist. Nainital, U. P. India.

READ the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars, write to the Hon. Treasurer, 14 Riebeek St., Worcester, C. P., S. Africa.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription — $1.50. Sample copy—fifteen cents.

ITALIAN QUEENS

90c Each

ANY QUANTITY

Puett Company

HAHIRA, GA.

CHOICE ITALIAN QUEENS and Package Bees

Thanks a Million, Folks!

We cannot accept any more orders for package bees and queens for this season.

CLIFTON APIARIES

P. O. Box 684 Oroville, Calif.

BUY U. S. WAR BONDS

Pure Italian Queens and Package Bees

• • •

Due to heavy booking we have sold our supply for April and early May shipments. Can accept additional orders for shipment after May 10.

PRICES

Queens 1 to 49 $1.10 50 and up $1.00
2-lb pkg. with queen, $3.45; 50-up, $3.25
3-lb. pkg. with queen, $4.45; 50-up, $4.25
4 lb. pkg. with queen. $5.45; 50-up, $5.25

• • •

HOMAN BROTHERS

R. F. D. 2 Shannon, Miss.

JENSEN'S

Package Bees and Queens for June

We thank God that VE-Day has come. Now let's shorten the road to Tokyo by buying another Bond. We can rejoice with those whose sons will be spared and will return when the war is over over there, but we can also sorrow with those deprived of this joy. We cherish the memories of one so young and fine who gave his all. May we, every loyal American, resolve that we will appreciate more than we have in the past the Freedoms and Privileges we enjoy in this great country of ours.

QUEENS: The finest and best in our 31 years of commercial production.
1-24, $1.10 each; 25 and up, $1.00 each
3-lb. pkgs. with queens: 1-24, $4.50 each; 25 and up, $4.25.
3-lb. Booster Pkgs. (Queenless) deduct price of queens.

JENSEN'S APIARIES, Macon, Miss.

The home of "Magnolia State" Strain Italians

NORMAN'S
Bright Italian Bees and Queens

For 23 years we have been breeding the Italian stock. We guarantee pure mating of Queens, safe arrival on Queens and package bees. Health certificate furnished.

All package bees F. O. B. Express

2-lb. package bees with Queen	$3.00
3-lb. package bees with Queen	4.00
4-lb. package bees with Queen	6.25
Young laying Queens each	.75

NORMAN BEE COMPANY
Ramer, Ala.

Yes—We Put the Quality in

QUEENS

THREE BAND ITALIANS

2-lbs., $4.00; 3-lbs., $5.10
each additional pound, $1.10.
Book your order early with

THE ANDERSON BEE COMPANY
OPP, ALABAMA

PACKAGE BEES AND QUEENS

Leather Colored Italians
Bred for Production

Prices of Package Bees with Queens			
Lots of	2-lb.	3-lb.	Ex. Queen
1 to 24	$4.00	$5.00	$1.25
25 to 99	3.85	4.80	1.10
100 or more	3.75	4.70	1.10

Terms, 25% deposit to book order, balance ten days before shipping date. We replace any bees that die in transit if it is our fault, if it is the carriers' fault, file claim with them. We are now shipping. Old customers will be given preference.

THE ISLAND APIARY
Collier City, Fla.

QUEENS 3 KINDS

90c Air Mailed — Send for FREE circular

ITALIANS
Caucasians bred to Italian drones
Daughters of Queens bred for Resistance
2-lb. pkg. bees with queen, $4.00 — 3-lb. pkg. bees with queen, $5.00
Over 25 years a shipper in U.S.A. and Canada
BLUE BONNET APIARIES, Route 1, Box 70, Mercedes, Texas

QUEENS—

Our queen yards will be operating full capacity for the remainder of the season—24-hour service on your orders.
Queens bred from daughters of resistant stock.
Queens in any amount, $1.00 each. Live delivery guaranteed.
We are sold out of package bees for the rest of the season.

Lucedale Apiaries, Lucedale, Miss.

LEATHER COLORED ITALIAN QUEENS
MIDDLE TENNESSEE APIARIES
1 to 25, $1.25; 26 on up, $1.10—From Imported Strains.
¼ books orders. Balance before shipping. Add 5 cents for all queens by air.
(All Queens after June 15, $1.00)
J. B. TATE & SON
1029 No. 4th St., Nashville 7, Tenn. — **Tel. No. 34509M**

Queens Queens

Italians or Caucasians

Lots of good ones ready to mail, so write or wire your order to us. It will have our prompt attention, whether large or small.

Safe arrival and satisfaction on every order, or queens will be replaced promptly.

BY AIR MAIL OR CLIPPED — AT NO EXTRA COST.

Package Bees

We can handle a few orders for packages, so if you don't have those hives filled, rush us your order.

PRICES AFTER MAY 20th

Lotsof:	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	$1.10	$3.85	$4.95	$6.05	$7.15
25-99	1.00	3.60	4.65	5.70	6.75
100-up	.90	3.35	4.35	5.35	6.35

Payable in U. S. Funds

The Stover Apiaries

Mayhew, Miss.

Your Honey is the Best!

x x x

Our Motto:
"The Beekeeper is Always Right"

Just bring in your honey and we will pay you the highest possible price plus regular tariff freight rate.

No samples necessary.

If unable to deliver, advise and we will send a truck to pick it up. —We understand beekeepers' problems, having been through the "mill."

You may be sure we are engineering sales in view of the future.

Veils, smokers, hive tools, foundation, etc., available for your convenience.

WOODROW MILLER HONEY COMPANY
1722 West Main Street
Alhambra, California
Phone CUmberland 32215

• • •

Deliveries can be arranged to:

N. E. Miller Honey Company

Colton, California

Three Band Italians

Also daughters of queens bred for resistance.

Having made substantial increase in my queen mating nucleus, will be able to take care of your queen orders more promptly.

PRICES:

	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	$1.10	$3.85	$4.95	$6.05	$7.15
25-99	1.00	3.60	4.65	5.70	6.75
100-up	.90	3.35	4.35	5.35	6.35

A. E. SHAW

Shannon, Miss.

I Am Still Open for Orders of Italian Package Bees and Queens

at the following prices:

	1-24	25-49	50 up
2-lb. pkg.	$3.80	$3.60	$3.55
3-lb. pkg.	$4.70	$4.50	$4.35

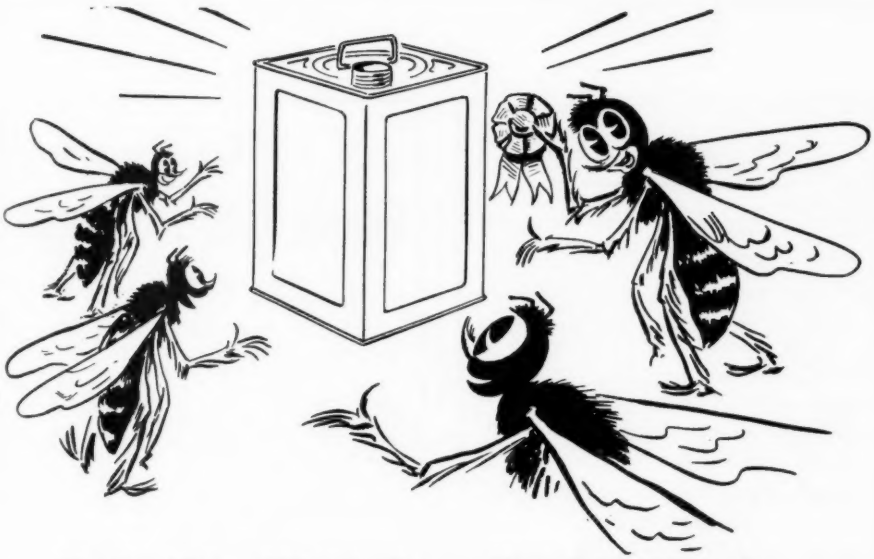
Extra queens each, after June 10, 90c
20% to book order in advance
Full weight, live delivery, prompt service quaranteed.

Oscar Arnouville

Hamburg, Louisiana

HELLO, FOLKS!
Here we are again!
STEVENSON'S LINE-BRED GOLDENS
To tell you our queens are available. We are sure you'll like us, for we are really good.
Price: $1.25 each; 50 to 100, $1.10; up, $1.00.
STEVENSON'S APIARIES
Westwego, La.

BUY U. S. WAR BONDS



Only One "Style" . . . But It's Right!

The 1945 honey can is limited to one size and shape . . . 60-pound square . . . but there's no restrictions on quality of material or workmanship. So, as in pre-war days, you can depend on Continental for the bright, tight cans you need.

CALL THE NEAREST CONTINENTAL DISTRIBUTOR

PHOENIX, ARIZ.
Quick Seed & Feed Co.
Western Seed, Feed & Honey Co.

TUCSON, ARIZ.
W. C. Collier

ALAMEDA, CALIF.
F. E. Boyden-Hansen Co., Ltd.

ALHAMBRA, CALIF.
B-Z-B Honey Co.

LONG BEACH, CALIF.
J. E. Delgado & Co.

LOS ANGELES, CALIF.
Bryant & Cookinham, Inc.
California Honey Co.
Diamond Match Co.
Hamilton & Co.
Los Angeles Honey Co.

SAN FRANCISCO, CALIF.
E. F. Lane & Son

SPRING VALLEY, CALIF.
Dorwin L. Baker

VALLEY CENTER, CALIF.
A. K. Whidden

DENVER, COLO.
Martin Brothers Company
Attn: R. J. Chadbourne

MONTROSE, COLO.
Western Colorado Honey Exchange

JESUP, GEORGIA
York Bee Co.

BOISE, IDAHO
Reilly, Atkinson & Co., Inc.

GREELEY, IDAHO
L. R. Rice

CHICAGO, ILL.
A. I. Root Co
W. F. Straub & Co.
Sears, Roebuck & Co.

HAMILTON, ILL.
Dadant & Sons

DECATUR, IND.
The Brock Store

COUNCIL BLUFFS, IOWA
A. I. Root Co. of Iowa

McGREGOR, IOWA
John Harnack & Sons

SIOUX CITY, IOWA
Sioux Honey Assn.
G. B. Lewis Co.

PADUCAH, KENTUCKY
Walter T. Kelley

BAY CITY, MICH.
Oscar H. Schmidt, R. F. D. No 4

GRAND RAPIDS, MICH.
A. G. Woodman & Co.

ONSTED, MICH.
L. M. Hubbard

BADGER, MINN.
Gordon A. Bell

FOREST LAKE, MINN.
Lionel Hopkins

MINNEAPOLIS, MINN.
Mondeng Mfg. Co.

MOORHEAD, MINN.
Northwestern Supply Co.

HIGGINSVILLE, MO.
Leahy Mfg. Co.

MANHATTAN, MONT.
Cloverdale Apiaries

ALBANY, N. Y.
G. B. Lewis Co.

GROTON, N. Y.
Finger Lakes Honey Prod. Assn.

SYRACUSE, N. Y.
A. I. Root Co. of Syracuse

FARGO, N. DAK.
Magill & Co.

PORTLAND, ORE.
Lewis M. White

SAN ANTONIO, TEXAS
The A. I. Root Co. of Texas

SALT LAKE CITY, UTAH
Miller Honey Co.

LYNCHBURG, VA.
G. B. Lewis Co.

WATERTOWN, WIS.
G. B. Lewis Co.

POWELL, WYO.
A. D. Hardy

CONTINENTAL CAN COMPANY

4622 WEST NORTH AVENUE, CHICAGO, ILL.

WHEELING · JERSEY CITY · LOS ANGELES · ST. LOUIS · CINCINNATI

Thrifty Bees

Early June delivery on packages and queens

2 pound packages, 1 to 24, $3.85; 25 to 99, $3.60; 100 up, $3.35.

3 pound packages, 1 to 24, $4.85; 25 to 99, $4.60; 100 up, $4.35.

Untested queen with each package.

Untested queens; 1 to 24, $1.00; 25 to 99, 85c; 100 up, 75c.

Thrifty bees are guaranteed to please.

WIRE if you are in immediate need of package bees.

W. J. FOREHAND & SONS

Fort Deposit, Ala.

Breeders Since 1892

DIXIELAND'S

Leather-Colored Italians,

Selected Queens

Send your order in now

1-24	**$1.10**
25-99	**1.00**
100-up	**.90**

Dixieland Apiaries

Greenville, Alabama

York's

Package Bees and Queens

Quality Bred Italians

We have just completed a heavy package bee season and due to extra heavy demand were unable to accept many late bookings for which we were sorry. For the balance of the season we are prepared to handle your rush orders for quick shipments on package bees or queens. Prices as follows:

2-lb. pkgs. with queens, $4.25 each
3-lb. pkgs. with queens, $5.25 each
Young laying queens .....$1.25 each
(Any number)

Queenless packages, deduct $1.10 per package.

Yes, we are booking orders for 1946, same terms and subject to prices to be revised later. Those who had their orders returned this season or failed to get bees at all may avoid the same difficulty another season by booking early.

York Bee Company

JESUP, GEORGIA, U. S. A.
(The Universal Apiaries)

PURE THREE-BANDED ITALIAN QUEENS

The John M. Davis Strain

Having bred queens for Mr. John M. Davis for years and by careful and select breeding, have maintained the same fine strain of bees. Having selected and tested breeders for the past few years from the best honey gatherers and most prolific queens, I can offer the same quality queens.

PRICES FOR MAY

1-24 $1.25 each untested.
25-99 $1.15 each untested.
Guaranteed purely mated
After June 1st, any amount $1.00 each.
Cash with orders.

LITTLE'S APIARIES
Shelbyville, Tenn. P. O. Box 122

FLOWERS' IMPROVED QUALITY ITALIAN QUEENS

Give them a trial and see for yourself.

$1.00 each, any number, delivered. Write for prices on large orders.

FLOWERS BEE COMPANY
Jesup, Georgia

BUY U. S. WAR BONDS

GETTING BEES OUT OF SUPERS

(Continued from page 251)

bees from the supers, leaving less than a dozen bees in a stack.

I want to thank Mr. Kramer and Gleanings for the article that led to this investigation. It has solved for me, the most vexing problem of the whole honey business.

Kissimmee, Fla.

[Using a wire-screen pyramid with an escape hole at the apex was commonly used some years ago, but this was before the double-end Porter escapes were used as now made. Young bees that can't fly would be inclined to go down rather than up to possible brood. Your theory is correct.—Ed.]

ITALIAN

Queens Queens Queens

Tanquary—a great name in bee production.

We offer you good, laying young Queens.

Good queens our specialty.

Write, wire or telephone your order NOW. Safe arrival Guaranteed.

15% discount on prices given below for the balance of the SEASON.

	1 to 24	25 to 49	50 to 100
Quantity			
2-lb. pkg. with queen	$4.15	$4.05	$4.00
3-lb. pkg. with queen	5.15	5.05	5.00
Extra queens	1.25	1.20	1.15

Queenless packages, deduct $1.10 per package

Tanquary Honey Farms, Inc.

Lena, South Carolina

SOYBEAN FLOUR (Pollen Supplement) AND POLLEN TRAPS

We are distributors of Staley's Lo-Fat, High Protein expeller processed soyflour for beekeepers. The flour and materials for our pollen traps are of the highest quality.

KILLION & SONS APIARIES
Paris, Illinois

BEE STINGS

Pheno-Isolin instantly stops the pain and quickly reduces the swelling. Results guaranteed. 4-oz. bottle, $1.00 Postpaid.

The Force Co., Scranton 10, Pa.

KNIGHT'S
Leather Colored Italians

The best honey gatherers

Prices, $1.00 ea.; 100, 90c ea.

No charge for clipping.

Jasper Knight

Hayneville, Ala.

Thrifty Three-Banded Italians
Packages Bees and Queens

They are not too dark and not too light, but they are the kind that suit most people just right. If you want your order filled right just give me a trial. Full weight and safe arrival guaranteed.

PRICES:

Queens	$1.10
2-lb. pkgs. with queens	3.50
3-lb. pkgs. with queens	4.50
4-lb. pkgs. with queens	5.50

FARRIS HOMAN

Shannon, Mississippi

"BESSONET'S"

Thanks to all whom we have served this spring, and may the year bring you a rich harvest. To those whom we could not serve, we express our deep regrets. Here is an opportunity to try our stock and we urge you to place your order as far in advance as possible. Deduct 10% off spring package bee prices for June delivery.

Prices: Queens, 1-9, $1.00; 100 or more, 90c each.

BESSONET BEE COMPANY

Donaldsonville, Louisiana

FIFTY YEARS WITH THE BEES

JUNE BOOSTER PACKAGES

Assure a bigger and better crop of honey by using them.

	1-6	7-25	25-100	100-up
2-lb. pkgs. without queens	$2.75 each	$2.65 each	$2.60 each	$2.50 each
3-lb. pkgs. without queens	3.75 each	3.65 each	3.60 each	3.50 each
4-lb. pkgs. without queens	4.75 each	4.65 each	4.60 each	4.50 each

If queens are wanted in above packages, add $1.00 each. Individual queens, $1.00 each, any number.

We suggest that you try these booster packages. Nothing beats a few bees added to a weak colony if you want honey. A great many of our large honey producers are now using them. It pays to add these bees to weak colonies a few days ahead of the honey flow. We guarantee you will be more than pleased with results.

M. C. BERRY & SON

Box 684 **Montgomery, Alabama**

COMB HONEY WANTED

Advise the quantity, grade, size section, and how packed.

Frank H. Hauck

P. O. Box 84, Kew Gardens, N. Y.

Bank references furnished on request.

Bright Three-Banded Italian Queens

The kind that every beekeeper is proud to get. Gentle, good honey producers. Price balance of season: 1 to 24, $1.10; 25 to 99, $1.00; 100 up, 90c.

Taylor Apiaries, Luverne, Ala.

JUNE QUEENS

Leather Colored Italians

$1.00 each

Air Mail Prepaid

R. L. Bernell

Rt. 6, Box 270, New Orleans 17, Louisiana

Look for this Sign
QUALITY AT LOW COST
When You Want

U. S. Pat. Off.
Trade Mk. Reg.

KELLEY — "The Bee Man"

QUEENS

QUICK SHIPMENT
FROM PADUCAH

1 to 25, $1.25 each; 26 to 99, $1.15 each;
100 and over, $1.05 each

PACKAGE BEES
After May 20th

	1-2	3-24	27-99	Above
2-lb. pkg. with queen	$3.90	$3.65	$3.50	$3.35
3-lb pkg. with queen	4.90	4.65	4.50	4.35

THE WALTER T. KELLEY CO.
Paducah, Kentucky

ITALIAN QUEENS

Several thousands ready for immediate shipment—$1.00 each

3-lb. packages with queens, $5.00; 2-lb. packages with queens, $4.00

WE SERVE TO SERVE AGAIN!

Sunny South Apiaries
Bunkie, La., I. Clark, Prop.

Three-Band Italians for 1945 with Queens of Highest Quality

Prompt Service for June

	1 to 3	4 to 24	25-up
2-lb. pkgs. with queens	$3.40	$3.30	$3.20
3-lb. pkgs. with queens	4.50	4.25	4.10
Young laying queens	1.05	1.00	.95

Our breeder queens are from heavy honey producing colonies, non-swarming, long life and gentle.

E. R. RALEY, 710 W. Altamaha St., Fitzgerald, Ga.

BEEKEEPERS ITEM

Serving the beekeeping industry for a quarter century without bias or prejudice. "The forum for the thoughtful." One year $1.00; two years, $1.50; sample copy, 3c stamp.

With Gleanings it provides a combination that covers the beekeeping field.

Both magazines for one year, $1.75
BEEKEEPERS ITEM
P. O. Box 687 San Antonio, Texas

Australian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the
"AUSTRALASIAN BEEKEEPER"
Subscription 5 shillings per year. Start any time. Inquire for International Money Order for 5 shillings (Australian) at your Post Office.
Write now to the editor, P. O. Box 20
West Maitland New South Wales
Australia

SUMMER PRICES–1945
Three-Band Italian Package Bees And Queens

Full Weight, Prompt Shipment, Young Bees, State Health Certificate with each Shipment. Live Arrival Guaranteed. Replacement or Refund made promptly upon receipt of bad order from your Express Agent.

2-lb. Package with Queen	$2.80 each
3-lb. Package with Queen	3.60 each
4-lb. Package with Queen	4.40 each
5-lb. Package with Queen	5.20 each
Untested Queens	.80 each
Tested Queens	1.60 each

Payable in U. S. Funds

If bees are wanted without Queens deduct 80c from the price of the Package. To have the queen introduced to the Package, add 80c each.

JACKSON APIARIES
Funston, Ga., U. S. A.

BETTER-BRED QUEENS---Three-Banded Italians

DON'T LET THOSE POOR QUEENS ROB YOU OF A CROP OF HONEY.
WE HAVE PLENTY OF GOOD QUEENS TO REPLACE THEM.
90c EACH—ANY QUANTITY

Calvert Apiaries, Calvert, Alabama

PACKAGE BEES — ITALIAN QUEENS

Light, 3-Banded Italians reared from queens tested for heavy honey producing. Long life, good winter resistant and gentle. Stock I have been breeding from since 1926 and have made me continuous good customers. Can also furnish queens reared direct from government queen resistant to disease. Also have access to thousands of colonies of Association Members, for large orders, free from disease. War veterans preference and 5 per cent discount.

On all checks under $100 add exchange fees of 10 cents. Over $100 add 20 cents. No exchange on P. O. money orders.

Queens of either stock	$1.25
Bees, 2-lb. with queen	3.90
Bees, 3-lb. with queen	4.90
Per extra lb.	1.10

AFTER JUNE 15TH, 15% LESS

HOMER W. RICHARD

Route 3, Box 252A **Phone 1370** **El Dorado, Arkansas**

POLLEN SUBSTITUTES AND SUPPLEMENTS

(Continued from page 254)

day period would support this assumption.

Please read the following revision of the part marked by you on page 127 and see if this version would be more explanatory than the previous one.

"It was noticed, however, that although the pollen supplement feeding resulted in production of a smaller number of unsealed larvae, the brood rearing activity of the bees in those colonies were nearer normal than that in the colonies fed a dry skim milk mixture.

"The average number of sealed cells at the end of the first ten-day period was 1167 for the dry skim milk substitute and 780 for the pollen supplement fed colonies. However, at the end of the second and the third ten-day periods there were about four times as many sealed cells in the pollen-fed colonies as in those fed the dried skim milk mixture. This means that in these two last periods four times as many larvae had reached the sealing stage in the pollen supplement fed colonies as in the colonies fed the dry skim milk-soybean flour mixture, so the total number of sealed cells produced during the three ten-day periods was about equal for both groups. Colonies fed on the dried brewers' yeast-soybean flour mixtures reared brood normally, just as in the colonies outside."

ITALIAN BEES AND QUEENS FOR 1945

We still have a few good dates open
Order direct from this ad.

2-lb. package with queen, $4.00
3-lb. package with queen, $5.00
Queens $1.25

5% discount on 50 packages or more.
Our bees are gentle and good honey gatherers. 25% will book your order..

WALKER APIARIES
Pharr, Texas

ITALIAN PACKAGE BEES AND QUEENS

We are now booking orders for 1945
Place your orders early for preferred shipping date.

F. E. MORRISON
Box 320 Butte City, Calif.

Pettit's Package Bees and Queens

Our twenty-first shipping season has gone by and we thank the Great Giver for good weather, our many friends for good business, and the express companies for good transportation.

Orders for 1946 are already being booked, subject to agreement on prices in November.

Summer prices for our good queens of three-banded Italian stock, June through September—

Quantity: 1-11, $1.00 each, 12-99, 90c each; 100 and up 80c each.

Please send cash in U. S. funds with order. If Canadians send 10 per cent extra, we will attach Canadian Customs Stamps to prevent delay.

MORLEY PETTIT

Tifton, Georgia

NOW is the Time

To plan for late summer and early fall requeening.

When you buy daughters of queens bred for resistance to AFB consider these factors:

1. Scientifically selected and tested mother queens every year.
2. Reared under rigid rules for high grade daughters with selected mating.
3. Samples from stock queens tested for resistance and performance.

You get these features when you buy from the Iowa Beekeepers' Association.

Prices: 1-9, $1.50; 10-49, $1.40; 50-99, $1.30; 100-up, $1.25.

Write for shipping dates

Iowa Beekeepers' Association

State House, Des Moines, 19, Ia.

This photo shows a portion of one of our queen yards containing over 6,000 nuclei

ITALIAN QUEENS

Thousands available immediately. (Our capacity: 400 daily averaged thus far this season.) Price, $1.00 each.

3-lb. pkgs. with queen, $5.00—2-lb. pkgs. with queen, $4.00

OVERBEY APIARIES, BUNKIE, LA.

TOO LATE TO CLASSIFY

FOR SALE—Root ten-frame metal cover bee hives, no frames, guaranteed no disease, $2.50 each. Irvin Van Devier, Medina, Ohio.

FOR SALE—8 tons of fine buckwheat honey in new 60-lb. cans. Julius Seewaldt, Johnsonburg, N. Y.

WANTED—Comb honey, section or bulk, also extracted. Quote prices for quick cash. Lose Bros., 206 E. Jefferson, Louisville, 2, Ky.

USED EXTRACTORS FOR SALE—1 2-frame Root Novice, $7.00; 1 4-frame Universal, $20.00; 1 6-frame Root Automatic and power drive, $45.00; 1 8-frame Root Automatic and power drive, $45.00; 1 ¾" Honey Pump without reduction drive, $10.00. M. J. Beck Co., Box 7, Lansing 1, Michigan.

ITALIAN QUEENS

FOR COMPLETE SATISFACTION TRY

OUR CHOICE ITALIAN QUEENS
Only ..... $1.00 each

Hundreds ready for immediate shipment, Send ten cents extra per queen for AIR MAIL service. No charge for clipping wing.

ALSO OVERWEIGHT, DISEASE-FREE

Package Bees for JUNE delivery
2-lb. pkg. with young laying queen, $3.50
3-lb. pkg. with young laying queen, 4.50
Write or wire

PORT GIBSON APIARIES

Port Gibson, Miss.

NOTICE NOTICE NOTICE

After June First, the Apiaries formerly known as Baker & Running, will be under the full ownership and management of C. W. Baker.

	Queens	2-lb. pkg. & qn.	3-lb. pkg. & qn.
1-24	$1.10	$3.85	$4.95
25-99	1.00	3.60	4.65
100-up	.90	3.35	4.35

WE HAVE NEVER HAD ANY DISEASE
Our Bees Get Honey — All Orders shipped in order received.

Address all correspondence to:

C. W. BAKER, Sumterville, Ala.

Telegraph Epes, Alabama **Sumter County**

LOWER PRICES AFTER JUNE 1st

Bright 3-Banded Italians

Yes, We Have Them

Place your order with us now, we are not the biggest shippers of package bees and queens, but we rank with the best in quality and service. Safe arrival, satisfaction guaranteed. Health certificate furnished. In U.S.A. and Canada.

PRICES TO JUNE 1st

	1-49	50-100
2-lb. pkg. with queen,	$4.00	$3.85
3-lb. pkg. with queen,	5.00	4.85
Untested queens,	1.25	1.15
PRICES AFTER JUNE 1st		
2-lb. pkg. with queen,	$3.75	$3.50
3-lb. pkg. with queen,	4.75	4.50
Untested queens,	1.00	0.90

All tested queens double the price of untested queens.

Packages bees, F.O.B. Express, if by parcel post add postage.

Norman Bros. Apiaries, Ramer, Alabama

Root QUALITY BEE SUPPLIES

For Michigan

Root QUALITY BEE SUPPLIES

FOR SATISFACTION — BUY THE BEST

There are not enough supplies available to fill all orders promptly. We endeavor to consider the "OTHER FELLOW" when filling orders in these war times and hope to please everyone.
We have a good stock of glass and tin HONEY CONTAINERS including plenty of 5 and 10 pound tin honey pails.

WRITE FOR PRICES.

M. J. BECK COMPANY

Successor to M. H. Hunt and Son

510 N. Cedar St. **Box 7, Lansing 1, Michigan**

QUEENS QUEENS QUEENS

Yellow Italian Queens bred for production and gentleness, health certificate and live delivery, no C.O.D.

Select Untested Young Laying Queens.

1 to 24, 95c each; 25 on up, 85c each

PLAUCHE BEE FARM

HAMBURG, LOUISIANA

PACKAGE BEES AND QUEENS

LINE BRED ST. ROMAIN'S "HONEY GIRL" ITALIANS

Package and Queen Prices to end of Season

	1-5	6-25	26-up	
3-lb. Pkg. with Queen,	$4.85	$4.65	$4.50	We will have
4-lb. Pkg. with Queen,	5.85	5.65	5.50	QUEENS
5-lb. Pkg. with Queen,	6.80	6.60	6.45	
Queens alone	1.00	.90	.80	all summer

Queens in quantity lots, $70.00 per 100.

Package losses replaced, Bad Order Express receipt must be sent to us. Queen losses replaced if dead queens are returned in their own cages.

State Inspection Certificate with each Shipment.

St. Romain's "Honey Girl" Apiaries

MOREAUVILLE, LOUISIANA

PACKAGE BEES WITH CARNIOLAN QUEENS

2-lb. packages with queen, $4.00 each, f. o. b.
3-lb. packages with queen, $5.00 each, f. o. b.

EPHARDT'S HONEY FARMS, PLAUCHEVILLE, LOUISIANA

NEEDED SUPPLIES – HARD TO BUY!
(We have them)

No. 14—4 fr. Non-Reversible Extractor, Hand Power	$14.75
No. 6—2 fr. Non-Reversible Extractor, Hand Power	11.75
10 fr. Wire Queen Excluders, wood bound, 5 or more each	.80
25-lb. lots Thin Surplus Foundation (following sizes) 3⅞ x 16 - 4½ x 16½ - 4¼ x 17¼ - 3½ x 14¼	19.75
25-lb. lots "Hercules" Plain Brood Foundation	17.50
25-lb. lots "Hercules" WIRED Brood Foundation	18.50

Brood Foundation Sizes 8 x 16¾ or 8⅓ x 16½

HAVE YOU TRIED OUR "HERCULES" WIRED IRONSIDES FOUNDATION?
WITHOUT A DOUBT THE BEST FOUNDATION ON THE MARKET.

100 Sheets	$12.50	
50 Sheets	6.50	8⅓ x 16½
10 Sheets	1.35	O N L Y

2-lb. Pkg. Bees with Queen (untested - untreated)	$3.50
3-lb. Pkg. Bees with Queen (untested - untreated)	4.50
1 Queen Bee, Ultra Violet Ray Treated each	1.25
Wire Face Bee Veil each	.80
Bee Escapes each	.12
Smokers 4 x 7 each	1.00
2" Hive Staples per lb.	.30
COMB HONEY SECTIONS	
No. 1 Grade 4¼ x 4¼ x 1⅞ per 500	6.60
No. 2 Grade 4¼ x 4¼ x 1⅞ per 500	5.90
No. 1 Grade 4¼ x 4¼ x 1⅞ split 3 sides per 500	7.10
Cellophane Wrappers for above sections per 100 sheets	1.25
Cellophane Wrappers for above sections per 500 sheets	5.50
1 lb. Glass Honey Jars, packed 2 doz. per case	1.00
2 lb. Glass Honey Jars, packed 1 doz. per case	.90
5 lb. Glass Honey Jars, packed ½ doz. per case	.55
5 lb. Friction Top Cans, packed 50 per carton	3.75
10 lb. Friction Top Cans, packed 50 per carton	5.00
Bee Gloves per pair	.75

TERMS: CASH WITH ORDER, F. O. B. CINCINNATI
WE WILL BUY YOUR HONEY AND BEESWAX AND PAY THE CEILING PRICES.
NO LOT TOO SMALL OR TOO LARGE. WRITE US.
We also render wax from your old comb or cappings and work your wax into comb foundation. Write for our general price list.

THE FRED W. MUTH COMPANY

229 WALNUT ST. CINCINNATI, OHIO

Look for this Sign
QUALITY AT LOW COST
When You Want

U. S. Pat. Off.
Trade Mk. Reg.

KELLEY — "The Bee Man"

Glass - Tin

16 oz. Economy Jars, carton 24 each,	$ .70
32 oz. Economy Jars, carton 12 each,	.42
5 lb. Economy Jars, 12 cartons,	5.00
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